MASSACHUSETTS PLOUGHMAN

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Agricultural.

A New Market for Dairy Products.

The United States Department of Agriculture seems to think that a good market for the dairy products of the United States can be found in Porto Rico and Cuba, and possibly in some of the other West India Islands, particularly in those which the United States has been trying to purchase from Denmark. It must be built up gradually, as many of the natives do not use butter, considering it a luxury only to be used on special occasions, while others have become so accustomed to the very poor and usually rancid butter of native production that they would not believe that a perfectly sweet butter was the pure article because it lacked the flavor to which they are accustomed.

Yet with some two thousand or more Americans in Porto Rico, there should be a demand for American butter, as the native butter is made by the most primitive methods, the cattle kept being rather adapted to growing working oxen than for dairy purposes, and they are not what is usually called the dual-purpose cows, seldom weighing over eight hundred or nine hundred pounds each, and not productive of milk, as they are usually milked but once a day, and often not longer than to take what the calf does not demand. If a cow will give from five to eight quarts a day, besides what the calf takes, for five months in the year, she is called a pretty good one in Porto Rico, and would sell for about $50. If any efforts have been made toward good breeding, they have been in the direction of producing working cattle, as they are used more for draft purposes than horses which are seldom seen excepting in the case of the richer planters.

One drawback to the sending of American butter there is the fact that but few of the dealers even in the larger cities are provided with refrigerators, ice chests or even ice with which to keep it cool, nor are our steamers for their ports, so that it is often soft, if not rancid, upon arrival, or at least, on delivery to the customers.

The milking is done on what might be called the natural plan, the calf being turned with the cow to start the milk, and then the milker beginning and trying to get three-fourths of the milk, while the calf has the remainder. It is useless to say that the calf does not get much, while the milker is satisfied with from one pint to six quarts a day. Some milk sellers will take up a cow and milk her whenever milk is called for, though it may be three or four times a day, in which case the calf is the loser, unless a different cow is taken each time. When the milk was taken from three teats, the calf having the other, it showed from 4.25 to 4.45 per cent. of butter fat, but when the three-fourths was taken away and the calf allowed to take what remained, it varied from 3.05 to 3.65 butter fat, and as there is only a guess as to when the three-fourths of the milk is taken, it often happens that the calf gets but a small amount, or more may be left than he needs, and many calves die from starvation within a few months after birth.

During the forenoon the calves run with the cows, but in the afternoon they are separated, and the cows are milked at night. The milk sold in the larger towns or cities is often adulterated with water and sometimes boiled, but seldom cooled before delivery to the buyers, and perhaps if not all sold in the half day, it may be boiled again. The churning is most frequently done by shaking the cream or the whole milk in a wide-mouthed jar, and is heavily salted after it has been made. As the temperature is not reduced during this process, the product is often more like thick, sour cream than like the butter we know, and it may not contain more than sixty per cent. of butter fat, as was found in a sample tested by American chemists, while another sample being peddled about the streets had less than thirty per cent. of fat, and the maker said she beat up the cream with a stick in a tin pail, and added some strong Spanish butter that was received in tin cans, yet that was sold at one cent a pat of about two-thirds of an ounce, or about twenty-four cents a pound.

Where butter imported from the United States, or even the poorer canned product from Spain is sold, this native butter has but little demand and often is not handled at all, though the price of imported butter is much higher than of the native butter. As may be imagined, there is but little care taken to have cleanliness in the stables, the milking pails and cans, or in the handling of the milk, whether for sale or for butter or cheese making.

It may be asked if one could not go there with good cows and a good knowledge of the modern methods of dairying and make a good profit. We think so, but there would be certain conditions to be observed—the cows from the Southern States do better there than those from the Northern States, and those from New England or New York frequently yield to the Texas fever, as the ticks which carry the contagion abound in some sections there. The dairyman who goes there should make arrangements for an ice plant before he begins. There are but few places where ice can be procured at all. Near San Juan and Ponce it is sold at eighty to ninety cents per hundred pounds, and in those cities it retails at about two cents a pound, while at the interior towns it may range from five to eight cents a pound. In a tropical climate it is almost indispensable to use ice in handling milk for sale or for butter making. Another thing should be remembered, that cattle taken there in the spring do not do as well as those taken there in the fall, and are more liable to die from Texas fever, but tuberculosis is almost an unknown disease. Of numbers that were given the tuberculin test less than one per cent. responded.

Some cheese is made in Porto Rico and probably some in the other islands, but it is like the butter, of inferior quality and in but small demand, but the imports of cheese from the United States have increased in amount and value during the past three years, though they fell off very much in the years from 1895 to 1898, inclusive. The imports from the Netherlands, which were formerly their chief source of supply, have been greatly reduced.

Much more oleomargarine is imported from the United States than of butter, but it is not possible to give exact figures, as much of the oleo is entered at the custom house as butter. Certainly including the two we have increased our exports to Porto Rico until we send them more than twice as much as all other countries, and the trade could be largely increased if the proper agents could be found to handle it there, who would provide ice and place it where it would be kept firm until sold. As the consumption of the whole population of the island is roughly estimated at about one thousand pounds per day, there may seem to be scarcely enough to be worth cultivation, but when we remember that there are more than one million population, we can see that they should use about three million pounds a year or ten times the amount they now use.

The method of packing is important in gaining a new trade or increasing the demand, as conditions are different in that climate than for home trade. It is a general custom for those who use butter there to buy only in small quantities, owing to the lack of ice. While some five-pound packages or larger can be sold, the demand is greater for prints of from a half-pound to two pounds each. These should be put in packages not too expensive, but of some material that will not impart a flavor to the butter, well made and tightly closed, that they may hold even melted butter, easily opened, and neat and attractive in appearance. Wrapping the prints in a parchment paper and then packing them in pasteboard boxes would probably help their sale if they can be kept cool until delivered to the consumer.

Butter sent by the department from New York, Vermont, Iowa and Wisconsin retailed at forty cents a pound on arrival, but when not kept in a refrigerator was slightly off flavor in nearly every case in a week after arrival. In cold storage it kept well for two or three weeks. But more tests are needed to know just what grades are likely to sell best there, and what methods of packing are likely to prove best. But one thing is certain, a uniform quality will give best results, and they suggest that the date of packing should be placed upon each package.

PARTIAL VIEW OF THE HOME OF "FISHEL'S" WHITE PLYMOUTH ROCKS, HOPE, IND. PHOTO WAS TAKEN LOOKING NORTH.

Farm Hints for November.

CABBAGES FOR WINTER AND SPRING MARKET.

Although October is usually called the harvest month, November has many crops, too, that have not yet been harvested. Many of the cabbages have already been brought to market and sold, but there are those who will store them for the late winter and spring demand. They need to be harvested soon, and in dry weather if possible, but if this may not come, pull them and place them roots upward, that all the water may drain out of them. When this was done we have kept them very well in a cellar, but they do not keep well in some cellars, and although we have stood them upright and packed the roots in earth, and have hung them up to the floor joists heads downward, we never succeeded in making a sure thing of their keeping perfectly sound, and we were not sure whether the cellar was too dry or too damp, too warm or too cold. We have kept them until spring by placing fence rails on the ground in a sheltered place and placing the cabbage on them roots upward, then covering with straw or coarse hay, and that with about six inches of earth, to which we added as much more when we thought the soil was likely to freeze solid before morning. The rails gave opportunity for the water that fell or the snow to drain off, and they froze solidly enough so that January or February thaws did not affect them. The earth over them should be a conical mound, to shed as much of the rain as possible, and we usually put a wisp of straw at the ends of the heap, and if a large one more than two to give ventilation. We have known others to try the same plan, and scarcely find a cabbage that was merchantable in the spring. We have also wintered English or flat turnips in the same way, and while there was some loss, the advanced price in the spring compensated for that. The rutabaga turnips always wintered well in the cellar.

CELERY KEEPING.

The fall celery having been boarded up, blanched and sold, that which is intended for the spring market should be put in the pits or trenches with but little banking for blanching. That which may find market at Christmas may be blanched by packing with earth; the keeping in the pits and trenches depends much upon the care with which it is handled when put in. It never should be handled when wet, or when there is any frost on the leaves, and all broken or bruised stalks should be taken off. Then it should be so packed that it will stand upright, and not lean over to crowd on the other rows. The roof should be tight enough to keep out all water, and if the house or pit gets too warm water it, but not put any water on leaves or stalks. Let the water run under it to wet the roots. We never saw anything gained by burying the roots in the earth, though some are particular about that with every row that is set, yet we have seen a bunch which had all the roots cut off before it was put in the house come out as bright as those that had the roots buried in the soil. We liked about once in ten or twelve feet to put a narrow board across the pit to keep it from falling down. Then with a ventilator that could control the temperature, it was not difficult to blanch it at Christmas or hold it until February. Early blanching requires a temperature of about 40° to 45°, while to hold it until spring the temperature should be as near 34° as it can be maintained. By opening the ventilators at night and closing them in the morning the house can be cooled.

CARE OF SPRING CALVES.

When there is a decrease in the supply of milk, the spring calves are usually the first ones to suffer from its lack, unless the policy has been to stop feeding it to them as soon as they were able to eat grass or hay. We think it should be given them daily as long as it can be spared for that purpose, and when it is no longer available, substitute a little wheat bran or oats. Even oat straw that was cut while the grain was in the milk makes a good feed for them, and so does rowen or early cut clover hay. We think that no small part of the grain that has been made in the milk production of our cows is due about as much to the better feeding of our calves, forcing earlier maturity and bringing them at two years old as far advanced and as well developed as they used to be at three or four years old, as it is to the more liberal feeding and the better-balanced rations given them after they come fresh. One cannot take a calf that has been on short rations until it has developed to a cow, and make it a good milk producer after that by more liberal feeding. Give it a good start when young, and then it should make a good cow if it is from good stock.

CARE OF POULTRY.

We advised that the turkeys and other poultry that are intended for the Thanksgiving market should be fed liberally for four or five weeks before they are to be dressed, but they can scarcely be given too much or too rich food the next two weeks. Where the demand is for birds with yellow skin and yellow meat, use plenty of good sound yellow corn and corn meal, but if the market, like New York city, calls for white skin and flesh, use wheat instead. One is about as low in price for the feeding quality as the other. The pullets should now be put in the house, if it has not been done already, and everything made snug, that they may have no draught on them to produce the roup, or even colds. There is not much danger of overfeeding the pullets while they are growing, and they need more than the older fowl. Yet when the latter have begun to lay they must be well fed. An actual test has shown that the laying hen requires about one-third more food for the same weight than the idle or unproductive hen. If any hens have not finished moulting give them all the corn and meat scraps they will eat, and fatten them for the market. If they delay moulting until November they are probably not healthy, and certainly not very vigorous, and they must be fed all winter on the chance of obtaining a few eggs in the spring, and those eggs will seldom result in strong and early-maturing chickens.

FALL PLOWING.

A few years ago we thought that the idea of plowing lands in the fall which were intended for sowing or cultivating in the spring was becoming less popular among the farmers, but since they have got an idea of sowing cover crops upon the fall-plowed land, to be plowed under in the spring to furnish humus or vegetable matter, they seem to think more favorably of it and to practice it more. The cover crop removes the objection which many made to the fall plowing, the washing of the surface on side hills, which are so large a part of the farms in New England. Then the vegetable matter turned under by the plow makes the soil more friable, and it drains better, works better and resists a drought better. Even though the cover crop is only rye, which some assert can return nothing to the soil that it has not taken from it, we have seen good crops of potatoes and corn growing where the rye was plowed under, and in some cases this was in fields so nearly barren that we should not have expected much of a crop without the rye. A farmer in the western part of Massachusetts once showed us a very handsome field of corn growing where we had plowed under a rye crop on light land, and he said he had persuaded some of his neighbors to try the same experiment, but he said the rye crop looked so well that they decided to harvest the rye for the grain, and that neither grew a corn crop nor enriched the land. Another farmer in Plymouth County showed us a field which he had grown corn on for twenty years or thereabout, putting on no manure, as it was more than a mile from his barnyard, but sowing rye among the corn at the last hoeing, and plowing it on before planting corn the next year. He said by this practice the field had increased in its production from ten or fifteen bushels to the acre up to thirty or even forty bushels per acre in a good season, and he thought it looked rich enough then to grow a good crop of grass or clover.

DRAINING HOLLOWS IN THE MEADOWS.

There are often basins in the grass lands that are not drained, as there are no tile drains under them, and no outlet for the water provided. They make nice skating ponds for the small children, because the water is seldom deep enough to drown one if he breaks through the ice, but, really, that is about all they are good for. The water stands there, perhaps, with the ice over it until the grass roots have rotted, and if any vegetation starts, it is but of the coarsest water grasses or weeds, the seeds of which have blown in there. Yet these basins are often of the deepest and most fertile soil, having received for years the wash of the surface around them, manure fertilizer or decayed vegetation. If they were properly drained they could be made to produce as much as three times their area in high land. They might not do it the first year, if the land has been poisoned or soured by the stagnant water that stands on them so long in winter, but they only need turning up to the sun. While the tile drain is the best remedy for them, as the channels which the water makes in going down to the tile also act as a passage-way for the air to get down and assist in the decomposition of the fertilizing elements there, warming the soil. But a surface drain can be cut quickly and cheaply in most cases, and it will prove of value enough to make the original outlay profitable.

Notes from Washington, D. C.

Rocky Ford furnishes a striking example of what extensive farming will accomplish for a community. The farmers grow the famous Rocky Ford canteloupes which are shipped all over the United States as a superior fruit; they also raise thousands of tons of sugar beets to supply the new beet-sugar factory. The melons are the most profitable under favorable market conditions; but the beets furnish the surest crop, and are a money-maker withal.

Three years ago the sugar factory was completed at a cost of over a million dollars and with a capacity of one thousand tons of beets a day, or from 125,000 to 150,000 pounds of sugar daily, according to the amount of saccharine contained in the beets. At that time the population of the town was about nine hundred. Today it is 3400, and the surrounding country has settled correspondingly. And the factory is not yet nearly in full operation, because it takes years for the farmers to get in a full beet acreage. The first year the beets raised were but 43,000 tons; last year the crop was ninety thousand tons; this year it will be over one hundred thousand tons. In 1900, four thousand acres were in beets; in 1901, 9200 acres were planted, and this year beet fields cover fifteen thousand acres.

There is a thorough community of interest between the farmers and the sugar makers. The factory must see that the beet grower is satisfied, or there will be no beets grown to keep it running; the beet grower is stimulated to careful work by the sliding scale paid for his beets. Not only the tonnage yield per acre, but the sugar content in the beet depends largely upon cultural conditions. If the grower's beets go fourteen per cent. sugar he gets $4 a ton, and for every one per cent. of sugar above fourteen the factory offers him thirty-three cents. The Rocky Ford sugar content has been very high, and the prices paid by the factory have averaged $5.17 per ton, which will make a total paid this year to the farmers of the valley in excess of $500,000. Moreover, the pay is spot cash, and there are no commissions or losses. Like Jones of Binghamton, the factory pays the freight. Some of the beets come one hundred miles, and these farmers net exactly as much as though their land were within sight of the factory. I saw a long line of twenty-eight cars on the Santa Fe road all piled full of ugar beets waiting to be switched up alongside the factory.

How much can a man make off of an acre of beets, and how many acres can he grow? Well, in the first place, the beet needs to be rotated. The best farmers do not, as a rule, plant beets two successive years on the same land, so they must perforce raise other crops. But the Rocky Ford beet fields run generally from five to twenty acres. The cost of raising the crop is $25 or $30 an acre, counting all labor; but it costs practically the same as it does with most crops to raise, say eight tons to the acre, as twenty-five tons, so the profit depends. Hardly a field crop, it seems, needs more han the exercise of good common sense combined with scientific knowledge. Twenty-five tons per acre is above the average yield, but it is by no means the limit. The average tonnage is constantly increasing year by year, as the growers study more the habits of the beet. The Agricultural Department gives thirty-eight tons per acre as the ideal average yield, with about fifty thousand beets to the acre, each beet weighing two pounds. This yield has been surpassed, however, on a prize acre with a forty-two-ton crop. If the careful grower can average twenty-five tons, he can clear $100 an acre, and he can easily take care of ten acres and also raise fruit or other crops in addition.

The beet needs a deep soil sufficiently loose to allow its taproot to easily penetrate; if the subsoil is hard the tap branches and the beet loses its sugar content. The depth to which the root will descend is not generally known. At the Paris Exposition a glass tube contained a sugar beet root whose tap was thirty-four feet long. This had been obtained by digging down alongside the root and then carefully spraying away the dirt. With this habit of deep rooting, the crop thrives on but little water. Also if water is scarce and the ground gets dry, the beets will stand still for weeks, and then start forward again into full vigor as soon as moisture comes. Subsoiling to a depth of fourteen or sixteen inches is practiced by the beet farmers upon first plowing land for beets.

The Rocky Ford irrigation ditch, bringing water from the Arkansas river, always carries a sediment, which furnishes renewed life to the soil, like the muddy flow of the Nile. Instead of decreasing the fertility, the land becomes better every year, and the farmers use no commercial fertilizer.

Colorado Springs is what is known as a double distilled "dry town." It is not only in the heart of the arid region with but six or seven inches of annual rainfall, but all deeds to property contain a clause providing that if intoxicating liquors are sold upon the premises, title shall be forfeited to the city corporation. And so some of the Western delegates to the Irrigation Congress missed that class of irrigation which is largely practiced, even in the driest regions, the wetting of the arid glands. However, like other "dry towns" it was found upon careful search that there were means of overcoming the difficulty. Several very handsomely appointed drug stores sold some very fine ginger ale—with and without—and other things.

Boston Provision Market.

The pork and lard market is not much changed, with fresh ribs off one-half cent, and corned fresh and smoked shoulders higher. Short cut and heavy backs $24, long cut $25, medium $23.50, lean ends $27, bean pork $19 to $19.75, fresh ribs 13½ cents, corned and fresh shoulders 10⅝ cents, smoked shoulders 11¼ cents, lard 12⅝ cents, in pails 13⅜ to 13⅝ cents, hams 13⅝ to 14¼ cents, skinned hams 13⅞ cents, sausage 11½ cents, Frankfurt sausage 10½ cents, boiled hams 19 to 19½ cents, bacon 17 to 18 cents, bolognas 10 cents, pressed hams 13½ cents, raw leaf lard 13½ cents, rendered leaf lard 13¾ cents, in pails 14⅛ to 14⅜ cents, pork tongues $25.50, loose salt pork 12½ cents, briskets 14¼ cents, sausage meat 11½ cents, country dressed hogs 8¾ cents.

Boston packers have still further increased their killing of hogs, the total for the week having been about 26,800; preceding week, 23,800; same week a year ago 29,500. For export the demand has been rather light, the total value by Boston packers for the week having been about $105,000; preceding week, $190,000; same week last year, $170,000.

Pork packing in the West has been considerably increased, according to the Cincinnati Price Current, the total packing for the week having been 365,000 hogs; preceding week, 305,000; same week a year ago, 400,000. Since March 1 the total packing in the West has been 11,450,000; same time a year ago, 14,420,000; decrease, 2,940,000.

Beef is easier than a week ago, though light cattle are reported to be in better demand relatively, with a fair trade late in the week. Extra sides 11 to 11½ cents, heavy 9 to 10½ cents, good 7½ to 8½ cents, light grass and cows 6 to 7 cents, extra hinds 13 to 14 cents, good 10 to 12 cents, light 6 to 6½ cents, extra fores 8 cents, heavy 7½ to 8½ cents, good 7 cents, light 6 to 6½ cents, backs 7 to 10 cents, rattles 4½ to 7 cents, chucks 5½ to 8 cents, short ribs 9 to 14 cents, rounds 7 to 9 cents, rumps 8 to 15 cents, rumps and loins 8 to 20 cents, loins 8 to 24 cents.

Beef arrivals for the week were small, being 123 cars for Boston and 42 cars for export, a total of 165 cars; preceding week, 137 cars for Boston and 60 cars for export, a total of 197 cars; same week a year ago, 155 cars for Boston and 98 cars for export, a total of 253 cars.

The mutton market is over supplied and easy. Lambs in particular are in very full supply, while the market is dull. Veals are in limited supply and pretty firm. Spring lamb 6 to 8½ cents, fancy 8 to 9 cents, yearlings 5 to 6½ cents, mutton 5 to 6½ cents, choice 6½ to 7 cents, veals 9 to 10½ cents, fancy and Brightons 10½ to 11 cents.

Iced poultry is rather easy under a full supply. Large, dry-packed chickens and fowls are pretty firm: Iced turkeys 15 to 18 cents, iced fowls 12 to 13½ cents, iced chickens 11 to 13 cents, fresh native fowls 13 to 15 cents, chickens 15 to 20 cents, fresh ducks 14 to 16 cents, live fowls and chickens 10 to 11 cents.

There is a small supply of venison on the market since the Maine open season begun. Whole moose have been sold as low as 10 cents per pound, and from that up to 12 cents, while moose saddles, "well skinned out" and trimmed, have sold as high as 20 cents. Deer have sold at 12 to 15 cents whole, with venison saddles as high as 18 cents.

Vegetables in Boston Market.

Vegetable prices below are for wholesale lots, jobbers getting 15 to 20 per cent. more.

Celery is still plenty, with Boston Market quoted at $3.50 per long box, three dozen to the box; Pasquale, $2.50 per long box; white, 40 cents for short boxes; cauliflowers, 60 cents per long box; hothouse, $2 to $3 per long box; lettuce, 25 to 75 cents per box; radishes, 40 cents per box.

Potatoes are pretty firm. Houlton Green Mountains 70 to 73 cents, Hebrons 68 to 70 cents per bushel, York State, Green Mountains and round white 63 to 65 cents, Virginia sweet $1.50 to $1.75 per barrel, double heads $2 to $2.25.

Onions sell at $2.75 per barrel, with jobbers by the bushel higher. Spanish, short crates, $1 to $1.20, long $2.75.

The very outside range on cucumbers is $7, with the market at $6 to $7, medium $3 to $3.50, No. 2 $2 to $2.50. Tomatoes sell all the way from 25 cents to $1.25 per box, as to quality, green 25 cents.

Cabbages are quoted at $1.50 a barrel, Savoy 60 cents per barrel.

Marrow squashes are quoted at $15 per ton, Hubbard and Bay State $20 per ton, Turban $20 to $25 per ton. By the barrel or 100 pounds they are jobbed accordingly. Pumpkins sell at 35 cents per box.

Yellow turnips sell at 85 cents per barrel, white French $1.25 per barrel, white flat 50 cents per box, beets 40 cents, carrots 50 cents, parsnips 60 cents, egg plants $1 to $1.25 per box, mint 75 cents, cress 40 cents, parsley 25 cents per bushel, peppers $1 to $1.50 per barrel and 75 cents per box, salsify 75 cents per dozen, Brussels sprouts 15 cents per quart by the crate.

Native string beans of good quality are done. Southern are quoted at $1.50 per basket, wax beans $1.50, Lima beans $1.50. Shell beans are about done for the season.

There is still some green corn on the market at 50 cents per box.

Local Fruit Market.

Apples are coming forward very freely, the receipts for the week having been 79,553 barrels; same time a year ago, 21,593 barrels. These tremendous receipts are only taken care of by very heavy shipments into export, and the market prevented from going entirely to pieces. For the week the exports were 54,949 barrels, including 40,720 barrels to Liverpool, 312 barrels to London, 614 barrels to Glasgow and 2303 barrels to Rio Janeiro by schooner Mabel Jordan. This shipping of apples is something of an experiment, and the results will be anxiously watched. For the same week a year ago the shipments were but 4311 barrels; same time in 1900, 40,349 barrels; total since the season began, 228,539 barrels; same time in 1891, 13,602 barrels; same time in 1900, 107,984 barrels.

Apples are rather dull. Baldwins and Greenings $1.25 to $1.75 per barrel, Gravensteins $2.25 to $2.50, choice $2.50 to $3, Pippins and Porters $1 to $1.50, Hubbardston $1.25 to $1.75, Pound Sweet $1.75 to $2, Twenty-ounce $1.50 to $2, Snows and Wealthies $2 to $2.75, Maine Harvies $2 $2.35, common apples 75 cents to $1.25, box apples, cooking 25 cents to 50 cents, choice eating 75 cents to $1.25. Small lots and jobbing from 50 cents to $1 per barrel more.

The supply of pears is short, with prices at very wide range. At wholesale they may be quoted at $3.50 to $5 per barrel. In a jobbing way, they are quoted at 75 cents to $1.25 per bushel for cooking, Bartletts $2 to $3.50, Beurre Bosc $2 to $3.50 per box, Beurre d'Anjou $1.50 to $2, Sheldons $3.50 to $5, Seckels $2 to $4. Some of these varieties are out of cold storage.

Peaches are out of the market mostly in the way of natives, with a few California here and quoted at 90 cents to $1.10 per box at wholesale for Saloways; Clingstones 75 cents per box.

For the week the receipts of peaches were but 275 packages; same week a year ago, 100 packages; this year, all Californias.

Native grapes are in rather more abundant supply and prices are easier. Delawares and Niagaras are scarce, however, and about out of market. Delawares 15 to 18 cents, Concords 10 to 12 cents, Niagaras 17 to 18 cents, Salems 13 to 15 cents, with jobbing prices 1 to 2 cents more. California Tokays sell at $1.50 to $2.50 per crate for four baskets. Foreign are quoted at $3 to $9 per barrel.

For the week the receipts of grapes were 6667 barrels foreign, 263,418 baskets and 20,972 carriers domestic; same week last year, 3265 barrels foreign, 168,883 baskets and 16,119 carriers domestic.

California oranges are in better request, with most of the old foreign fruit out of the way. They are quoted by the jobbers at $4.50 to $5 per box. Jamaica oranges are quoted at $4.50 to $5 for barrels, boxes $2.50 to $3.50. For the week the receipts of oranges were 299 boxes Jamaicas and 883 barrels; same week a year ago, 827 boxes and 2597 barrels Jamaicas; this year, 371 boxes California; last year 418 boxes.

California lemons are quoted by jobbers at 300 counts $5 to $5.50, 270 counts same as 300 counts, 360 counts $4.50 to $5, cases $5 to $6. Jamaica grape fruit is quoted at $4.50 to $6.50 per box.

Quinces are quoted at $1.50 to $2.50 per box, as to quality.

Cranberries continue very steady; barrels $5 to $7, crates $1.75 to $2.50, jobbing 50 cents to $1 more. For the week the receipts of cranberries were 2284 barrels; ame week last year, 3249 barrels.

Turkish figs are quoted at 10½ to 15 cents per pound, as to package and quality.

Chestnuts are quoted at $3.50 to $4.50 per bushel in a wholesale way, with jobbers selling for more.

How Was Coal Formed?

Some interesting and mysterious points in the history of coal formation are discussed by Dr. J. F. Hoffmann of Berlin, in the Zeitschrift fur Angewandte Chemie. Although authorities are agreed that coal is fossilized vegetation, the details of the process by which it came to be what it is are by no means clear. Dr. Hoffmann believes that spontaneous combustion was an important factor. According to a contributor to Engineering (London, Sept. 26), who discusses Dr. Hoffmann's paper, the popular view of the formation of coal may be summarized as follows: Certain plants or trees grow in morasses; they decay and sink; more plants grow on the first layer, and sink in their turn. The weighted-down residue decompose through the influence of microbes, with the generation of methane and carbonic acid; and when the decomposed mass is afterwards exposed to high pressure, we find, according to the age of the deposit, peat, lignite, coal, or anthracite; graphite does not appear to have the same genesis as coal. He goes on to say:

"Some weak points of the popular view are pretty apparent. If time and pressure be the main factors which decide the character of the coal, then we should find anthracite in the oldest geological formations, and peat in the most recent. But lignite occurs in the Devonian, and we know historically of the change of mine timber into lignite, while we have no examples of peat passing into coal. Further, anthracite forming the bottom layer should contain most ashes, and so far as actual experiments can teach us, the very highest pressures of twenty thousand atmospheres do not cause vegetable fibre to become coal."

Dr. Hoffmann raises some other points. He would distinguish three periods in the formation of coal. First, a period of microbe activity, a fermentation, so to say; then a period of decay, and, finally, the carbonization period proper. Mere heat does not change wood into coal, though we can finally obtain a substance like anthracite when we gradually raise the temperature above 400° C. Hoffmann draws attention to the spontaneous heating and ignition often observed in vegetable products, and he studies the problem thermochemically. Hay is very apt to heat in a warm, damp condition, and to burst into flames when air gains access. Wet flax is notoriously dangerous, and so are oiled rags. A mill containing grain and flour was burned down in Berlin some years ago. The fire was ascribed to spontaneous combustion, and in some big lumps of smouldering grain, which had been thrown into the river, Hoffmann discovered layers resembling lignite, coal and anthracite in this sequence. In all these cases moisture favors the combustion or the fungous growth starting it. With coal this is not so, because there is no organized fibre and no fungous growth. The writer in Engineering says in concluding his review of the German article:

"Geologically, we have reason to believe that the formation of the coal beds was followed by violent titanic convulsions, during which heat and pressure may have coacted. . . . By spontaneous combustion some seam would become charred; the heat would be communicated to another seam and so on, so that coal beds of considerable extent would be produced. But Hoffmann himself sees that we do not understand, on these lines, how it is the coal beds consist of fairly uniform coal,—coal, anyhow, not lignite,—all through down to their extreme veins. We do not arrive at any final conclusion as to the genesis of coal, therefore, and the chief interest of Dr. Hoffmann's paper lies in the fact that he draws attention to the influence of spontaneous combustion."—Literary Digest.

Importance of Good Milking.

There is no other business on a farm where a dairy of any size is kept that is so important as good milking. A farmer who relies on the product of his dairy for his cash profits cannot afford to have a careless or inferior milker. He might as well have a dishonest cashier, continually filching money from him, as to have a hired man—either from inability or carelessness—continually checking the source of his income by improper milking.

Twenty-five per cent. of all dairy cows have defective udders or teats. An inexperienced or careless milker will not observe these, and consequently he will not use the extra manipulations necessary to get all the milk as an experienced and good operator would. For instance, some cows have a kernel located in a teat, which tends to impede the milk. The best way to meet this difficulty is to force the milk into the teat from above by pressure on that part of the udder in immediate contact with the defective teat, at the same time squeezing the teat with the other hand. I make this explanation because I have repeatedly stood by and witnessed not only hired men, but old farmers, ignorant of this "trick of the trade," so to speak.

Don't tolerate a slow milker in your dairy, for he will injure you, and you must pay him while he is doing it. Do not tolerate a milker whose main object is to hurry up, hustle, get through, get the cows out of his way. He will slight everything in regard to good milking to favor his hobby of getting through. Better discharge such men at once.—Correspondent New York Tribune.

Some Fall Reminders.

The advantage of a thorough preparation of the seed bed for wheat increases the yield more than enough to pay for the extra work.

Potatoes and onions are crops that should be harvested as soon as they are ripe. Dry weather is best, and it is well to let them "season" five or six hours in sunlight. Spread out on barn floor, not very deep, where they can cure a few days in the shade. Let the air circulate by leaving the barn door open during the day. The onions will require a longer time to get them in proper condition for winter storage.

It is none too soon to look after the repairs of all the outbuildings.

It is better to have everything in good condition than to have to make repairs when weather conditions force it. All leaky roofs should be attended to first, for they are costly, as they cause destruction and loss in crops and other conditions. Broken panes in the sashes, loose boards, sagging doors, mangers or feed racks out of repair should all now be promptly attended to. There is nothing like having everything in perfect condition when it becomes necessary to house the stock and store the crops.

There will be no further use this season for many implements and tools. All such should be gathered and cleaned up. Those that need repairs should be laid aside, and the others snugly stored away.

If any of the branches of the orchard trees are broken while gathering the fruit, do not leave them in that way, but properly prune by cutting back to unshattered wood.

Do not let the falling leaves clog up the springs. Keep them cleaned out so the stock can have good water to drink.

If you are going to renew or make a new strawberry bed, now is the time to do it and to set out the plants. Every farm should have a good-sized strawberry plot, so as to provide an abundance of the delicious fruit for home use at least.

If you have stacked grain or hay, it will be well to make a thorough examination to note whether the top is in proper condition to turn the water off. This examination may save considerable loss, for there may be stacks that have settled in such a way that water is finding its way to their centres. All such should be retopped with long rye straw, canvas or other material.

Why not attend to those ugly gutters that have been washed in the roads, now, before the fall rains come and widen the breach, so as to make travel dangerous. A little timely work now will save more and harder work than if you wait. The fall rain where soil is light and roads are steep will do great damage if the roads are allowed to get in bad condition. There should be no tomorrow in road repairing. Good roads save the team and vehicles. The lanes that lead up to some farmhouses are costly disgraces. One would think a farmer would have pride enough, or mercy on his horses, to keep the road in good condition, but some of them do not seem to care at all.

If your pastures, owing to lack of rain, have become "brown and bare," and there are low swampy places in the fields, there is danger of the stock pasturing on herbs that are sure to cause them trouble.

There is one more chance—a last opportunity—to cut the weeds before they all become full of matured weed seeds, which will cause endless trouble in years to come. Make vigorous use of the effective old-time scythe around the outbuildings and fence corners, in the orchard, every place where the mower cannot be used to advantage.

Harvesting crops properly is as important as cultivating and growing them. There is great carelessness in securing farm crops, often so much that the waste and loss are very great. Improperly bound corn shocks cause loss of fodder and ears of corn.

Rough handling of fruits and vegetables cause bruises that induce rot and other losses.

The farmer that does not keep a good wheelbarrow misses lots of chances to lighten certain kinds of work, and a wheelbarrow is so handy that the farmer who has one wonders how he could ever get along again without it.

Pull a lot of tomato vines up by the roots before the frost touches them and hang them up in a shed that is open to the south. Most of the green ones will finally ripen.

A correspondent of an exchange says that in saving seed corn there are five points to look at—length of ear, depth of grain, smallness of cob, well-filled ends and a good place to keep it.

Attend the fall fairs, and don't be afraid to send some of your crop products for exhibition. If you don't encourage your county fair you should not complain if it finally evolves into a regular agricultural "hoss trot."

See that the dairy cows have a supplementary feed, now that the pastures are short and the grass has not as much nutriment as earlier in the season.—Baltimore Sun.

I. D. O'Donnell from Billings, Mont., brought a dozen enormous potatoes, each enough for a meal for a moderate-sized family. Mr. O'Donnell is a famous irrigator of alfalfa for sheep and cattle-feeding on the Yellowstone valley of Montana. The soil of the Montana valleys, he says, is very deep and rich, and the alfalfa roots run down to the incredible depth of forty and fifty feet. "There is nothing like personal attention to farming," he remarked to me. "No matter how good a man my foreman may be, the moment I get on the place myself I see where something needs doing that will save me dollars. My personal direction may mean $10, $25 or $30 a day. And yet a man must not stay on his farm all the time. It is by getting around that I can improve my methods. I am going up now into Wyoming where they finish off lambs that bring the highest Chicago prices, to see how they irrigate there. I hope I can learn something from them."

Literature.

Abbie Farwell Brown, who has already proved her ability to produce most pleasing books for children in "The Lonesomest Doll" and "The Book of Saints and Friendly Beasts," has written a third, "In the Days of the Giants." It contains stories of the gods, giants and dwarfs of Norse mythology. The giants are enemies to the gods, and thus the spirit of conflict is ever present. Thor and his wonderful hammer, Loki with his continued mischief-making, Balder, the beautiful, who loves and brings sunshine, and the great Odin, are all clothed with fresh interest by the lively fancy and a humor with which Miss Brown invests her tales. The palaces of the gods are great and beautiful, but there are constant conflicts with the giants who persistently endeavor to secure some of the mighty weapons of the gods. Thor's hammer and Idun's apples, which keep the eaters thereof forever young, are constant articles of contention. Loki is always associated with trouble, so his wit is continually drawn upon to save his own life. The principles of truth are constantly exhausted in all the deeds of the gods, and the book has a strong but subtle influence for good on the youthful mind. There are six delightful illustrations, representing quaint conceits of these old legends. Miss Brown has produced a lot of most enticing tales for boys and girls. [Boston: Houghton, Mifflin & Co. Price, $1.10 net.]

Richard Harding Davis recently wrote a little dramatic episode which breathes the atmosphere of the stage entitled "Her First Appearance," which has been issued in handsome style. A little child is performing her part before a vast audience. She has the spirit of the actress within her, and unconsciously falls into the graceful movements of the studied art. To one man who has the privilege of visiting behind the scenes the incident appeals most strongly. He notes the applause which the tiny child has drawn upon herself and the indifference with which the mite, apparently tired and half-starved, regards the enthusiasm displayed. The gentleman wanders to the little dressing-room where the children are disrobing, regardless of the presence of onlookers. The wardrobe woman directs Van Bibber to the child who has excited his interest, and he sits beside her, learns her name, and then ascertains from the wardrobe woman the brief history of the little actress. Her mother was an actress; her father—well, Van Bibber knew who and where he was. A sudden thought comes to him, and he asks permission to take Madeline home in his carriage. He soon finds himself at his friend's house. Placing Madeline on a divan in the hall he goes in to meet Mr. Caruthers. The conversation between the two men is one of severe tension, in which the eating sorrow of Caruther's life is laid open, and Van Bibber nervously tries to place the situation before him in the right light. When Van Bibber leaves the house he goes alone, leaving behind a silent yet happy man, and Madeline. He has not lived in vain. The author, Mr. Davis, has narrated in a touching way one of the real dramas of life which are so numerous. It is one of his best shorter books. [New York: Harper & Bros.]

Readers of "A Japanese Nightingale" will welcome Onoto Watanna's new romance, "The Wooing of Wistaria." In this new Japanese tale the author emphasizes the sterner qualities exhibited by the men and women of the picturesque country of which she writes. A Samourai is degraded in rank because of his marriage with a maiden who belonged to the Eta, the despised class in Japan, and loses his wife as an added punishment for the same misstep. He vows eternal vengeance and accomplishes his own aim, with the aid of his daughter and her lover, who are ignorant of the part played. When their eyes are opened the daughter is forced to betray her lover, and the latter is condemned to die. He is, however, luckily saved from the execution by the same maiden, although he thinks her guilty. Released he engages in a mortal combat, his armor bearer proving to be his beloved. Intrigue and love-making divide the attention of the reader, who at once becomes absorbed in the battlings of the Mikado against the arrogant Shoguns, and in the other events which form the historical background of the story. The introduction of Commodore Perry and the American fleet, and the negotiations of the treaty with the United States for open ports, is most opportune. Only a native can depict the many phases of Japanese life which we find so engagingly set forth, yet the book scarcely measures up to her former work. The illustrative and decorative features are in keeping with the text. [New York: Harper & Brothers. Price, $1.50.]

Korea is a new field for the novelist, and Archer Butler Hulbert has used his knowledge of that far Eastern land to good advantage in his tale of adventure and intrigue, entitled "The Queen of Quelparte." It is the story of the experiences of a young American, Robert Martyn, who had entered the employ of Colonel Oranoff of the Russian service, and incidentally fallen in love with his daughter, Dulcine. These three persons are the central characters, and they are active participants in somewhat stirring and unusual events, many of which actually took place, not in Quelparte, as the author has purposely recorded in his romance, but in the little country of Korea, shortly after the Chinese-Japanese war. In carrying out the scheme of Russia, Martyn is sent to a Buddhist temple on Lynx Island to bring the imperial sarcophagus, containing the body of the murdered queen, to the Russian legation at the capital of Quelparte, preparatory to a gorgeous funeral pageant. The Chinese, directed by Prince Tuen are alert, and in order to prevent the event blew up the temple in which the queen's body was deposited, before Martyn and his Cossacks could reach it. This appeared to prevent any funeral pageant and threaten dire results, but at the last moment Dulcine impersonated the dead queen, and the great event occurred. This bold stroke, with its great dangers and possible fatal results, is but one of the many interesting, not to say exciting, episodes which Mr. Hulbert relates with journalistic skill. With its Korean color, its clever plot, and the mixture of fact and fiction, "The Queen of Quelparte" is one of the unique and fascinating pseudo-historical novels of the season. The author is not the philosopher that Mr. Merriam is, nor does he unfold his story with the skill of Anthony Hope, but then this is probably his first novel, and one which gives promise of even more finished productions in the future. The Oriental illustrations by Winfield S. Lukens add to the attractiveness of the book. [Boston: Little, Brown & Co. Price $1.50.]

This is a story of Brahmin belief in transmigration of souls, worked out in an individual instance with the aid of a miraculous liquid. Michael Gulpe, so the ingenious author, Everit Bogert Terhune, tells us, was the son of a Frenchman who lived in India, where he became imbued with the philosophy and doctrines of Brahma. He was given a mysterious fluid which, if taken when dying, would enable one to remember his past life when he started on his next one. Michael took the fluid on his death bed,—after a brief married life,—and the next thing he knew was that his soul had lodged in the baby of the shrewish woman who lived in the flat below that which he and his wife had called their home. And his widow came down to see him one day, rubbed him under he chin and called him a clever little fellow! The possibilities of the use of material of this nature are as inexhaustible as they are humorous, and Mr. Terhune has given us a novelty, to say the least, although his story is brief, even with the large type used. Mr. Terhune appears to be a facile writer, with his descriptive powers well developed. [New York: G. W. Dillingham Company. Price, $1.25.]

This is not the first time that the "Meditations of Marcus Aurelius Antoninus" have been drawn upon for a small book of quotations. Mary W. Tileston of this city is the author of a volume which has long enjoyed deserved popularity, but the compiler of this new book of selections, Walter Lee Brown states that his point of view differs from those who have drawn from the same source. "I give those thoughts which have helped me, regardless of whether they included all the kinds of advice given by Antoninus," he says It must be confessed that Mr. Brown has culled choice bits from a wealth of good material and furthermore the little volume printed by the Merrymount Press of this city, is a dainty gift book, one of real worth because of the lofty sentiments and practical advice contained between its bright red covers. These helpful thoughts cover a great variety of topics, and the sentiments expressed are as true and forceful today as centuries ago when first uttered. [Chicago: A. C. McClurg & Co. Price 80 cents net.]

Historical.

—Michigan was admitted as a State in 1837. The number of the States had now doubled, and was twenty-six.

—Patrick Henry, a brilliant young lawyer and orator, was a member of the Virginia assembly. In his speech on the Stamp Act, he named several tyrants who had been killed. "Cæsar," said he, "had his Brutus, Charles I. his Cromwell and George III."; he was interrupted by cries of "Treason." When the noise had concluded, "George III. may profit by their example. If this be treason, make the most of it." His resolutions, adopted by the assembly, were the boldest declaration of Colonial rights that had yet been made.

—Jefferson and Hamilton were two of the ablest men that our country has yet produced Hamilton planned most of the laws for organizing the Government.

—The French Revolution began in 1789. For more than 150 years the French kings had ruled by their own will. All this time the people of France were dreadfully misgoverned, and were taxed so heavily that they could hardly find means to live. Affairs finally became so bad that the king was compelled to call a parliament together again, to consult about raising money. When it met, it gradually began to take all the power to itself; and in the next few years it abolished the former government, drove the nobles out of the country, put the king and queen to death, and engaged in a general war against the neighboring kingdoms of Europe. Great Britain was its principal enemy, and there was very little peace between the two countries until 1815.

—In 1793 the first newspaper in the Northwest was issued at Cincinnati, while it was yet a town of about a hundred log cabins. In 1794 two large passenger boats ran regularly between Pittsburg and Cincinnati. They were moved by oars, had bullet-proof sides, and were armed with cannon to protect them from the Indians.

—The panic of 1837 began just after Van Buren's administration, and lasted for more than a year. The banks suspended specie payment, that is, they declared that they had not the money to pay their notes. Men who had been rich were made poor in a day, and a pile of bank notes became as worthless as so much waste paper. There was hardly any work to be had, and men who had not been rich suffered distress and sometimes starvation. During the first two months of the panic the business failures in New York city alone amounted to more than $100,000,000.

—The Sub-Treasury Law was repealed by the Whigs in 1841, re-established in 1846 by the Democrats, and is still in force.

—The National debt was all paid off in 1835, and for the first time in its experience the Federal Government found that it was receiving more money than it could use. The amount not needed was divided among the States. But the States were as prosperous as the Federal Government. They borrowed and spent money freely for the construction of railroads, and though many of their plans were not wise, they aided immigration and settlement. Private prosperity was also general. The crops were abundant, manufactures were increasing, the banks doubled their number and capital, and every one seemed to expect to become rich in a day.

Winter Courses in the Massachusetts Agricultural College.

The work connected with the various short courses at the Massachusetts Agricultural College will begin this year Jan. 7 and will continue ten weeks. The number of inquiries received indicates that the interest in these courses, especially in the one in dairy farming, is constantly increasing, and it is believed that the number of students registered the coming winter will be large. The Massachusetts Society for the Promotion of Agriculture continues the generous support which it has for the last few years given to the course in dairy farming. It will offer this year three sets of prizes for students in this course, as follows:

1. Three prizes, $50, $30 and $20, to the students doing the best work in the course, both practical exercises and class-room work being considered.

2. Three prizes, $25, $15 and $10, to the students making the best butter, as judged by an expert at the close of the term.

3. Three prizes, $25, $15 and $10, to the students doing the best work in judging dairy stock.

For the purpose of the last-named competition, the students will be taken to one of the largest dairy farms in the State.

Besides the prizes offered by the Massachusetts society, there will be a number of others. The arrangements are not yet completed, but one of these prizes, offered by B. Von Herff of New York city, is one ton of kainit to the student acquiring the best knowledge of the use of fertilizers on grass lands.

The work in the dairy course is not directed simply to teaching butter making. It includes the study of soils, tillage operations and drainage; of manures and fertilizers and their use; and of the crops of the dairy farm. It includes also a study of the characteristics of the various breeds of dairy cattle; practical exercises in judging such cattle, as well as a study of the principles of stock breeding and stock feeding. It includes also a study of the conditions essential to the maintenance of the health of the animals of the farm; study of the conditions essential to the production of sound milk; and of the chemistry of dairy products. It includes also a careful consideration of methods of producing and handling milk and cream for market. The production of certified milk and modified milk is also studied, and the students have practical training in these lines of work as well as in the use of separators and butter making. The testing of milk and cream is also studied, and the students are given careful training in the use of the Babcock tester.

Opportunity is also given for the students who take the course in dairy farming to receive some instruction in horticulture and poultry farming. The chief insect pests of the farm and garden are also studied, and the best methods of fighting them are pointed out. This course, as well as the courses in horticulture, botany and chemistry, is open to all citizens of the United States free of charge for tuition. Candidates must be above sixteen years of age and must bring a satisfactory certificate as to moral character. The necessary expenses of the course are estimated at from about $50 to $60.

The courses offered at the college certainly afford rare opportunities to those interested in farming in any of its branches. Those in cities or villages who are without experience in farm life, as well as those born and bred on the farm, may obtain much needed insight into the scientific principles which underlie the various farm operations, as well as knowledge and training in the best methods. Prof. William P. Brooks is director of these courses, and students wishing further information or circulars descriptive of the courses should address him.

A PLENITUDE OF DEER AND MOOSE IN THE MAINE WOODS.

Sportsmen Now Flocking Thither.

The law is now off; the signal has sounded with the advent of October, and thousands of sportsmen are planning and preparing for a tour in the Maine woods.

Already the crack of the rifle has resounded and the chase is on; the fleet-footed deer and the raging, snorting moose go crashing through the brush, disturbed by this sudden noise and unlooked-for intrusion; startled they are, but naturally inquisitive they soon become the victims of the changed conditions which October brings in.

In these dense forests, where the only stir of life at this season is the drum of the partridge or the footfalls of the denizens which inhabit these jungles, the ardent sportsman now enters, the smoking camp fire and occasional bang of the gun being the only tell-tale signs of his habitation.

Arriving at his destination, wherever it may be, possibly a long ride in a rickety buckboard over country roads to some choice camping spot selected by an almost infallible guide; maybe it is some distant island in an inland lake, reached by a delightful paddle in the canoe; o perhaps it lies close to the railroad station, a registered camp or an up-to-date hotel, where the hunter is not obliged to rough it; it matters not, wherever his stopping place the preparations are the same—first a hearty meal and a good night's rest. Awakening in the morning in the fresh October sunshine and the bracing atmosphere of the pine forests, the hunter will feel equal for any task, and the search for big game is then on in earnest.

If the quest is for deer, then a mistake cannot be made in location, for deer in abundance can be found in any portion of Maine. In that famous fishing section, the "Moosehead Lakes where the disciples of "Isaac Walton" love to gather, the nimrod will find an equal plenitude of deer, and the same in the Rangeley and Dead River regions.

As two deer is all that any one is allowed to carry out of the State, then the man who knows how to shoot at all is pretty sure of his legal allotment.

The moose hunter, however, requires just a little more patience, a certain supply of skill and a goodly amount of caution, and his efforts will be repaid with thrilling and exciting adventure. These animals, which in recent years have increased under the protection of the Maine game laws, now roam the northern portions of the State in large numbers, and in 1901 the Bangor & Aroostook Railroad shipped 259 moose over its line; and this, together with the large number which were killed for consumption in camp, and those that fell a prey to the hunter's quarry in other portions of the State, gives evidence of the plenitude of this species of game.

If you desire to engage in moose hunting the services of a trained guide are almost indispensable, for, although the Katahdin, Aroostook and Washington County sections of Maine are known to be good moose territories, there are particular romping places and feeding spots where they gather in large numbers, and these places are known only to the experienced guide or woodsman.

While the excitement of moose hunting is generally of a nature to please the average sportsman, still the more zealous hunter can take a try at the savage forms of forest quadrupeds if he desires to venture into the interior of the Penobscot and Washington County regions. Wildcats and loup-cerviers are often encountered, and many a wildcat's hide from Maine finds its way annually to a New York or Boston market.

The berry section and orchards around Washington County are over run with bears, which at this season of the year are fattening at the farmer's expense in anticipation of the long winter's siege; and the sportsman who brings his shot-gun will find awaiting him small game and birds of quantity and variety to suit the most fastidious taste,—rabbits, squirrels, beaver, etc., grouse, quail, partridge, ducks, pigeons and a score of others.

And, hold! Who knows but what "Diana" will favor you with the good fortune to catch a glimpse of the giant of the "Pine Tree Forests," the famous "White Moose," which, according to the estimate of persons who have seen him, weighs twenty-five hundred pounds and has antlers measuring twelve feet across. This animal has been seen several times in the past few years by guides and lumbermen. He first made his appearance in 1893, and since then has been seen several times, each time in a different section of Maine. He is a rare prize, and he has never been shot at with either camera or rifle.

Even if you are not a sportsman, you will enjoy a trip in the wilds of Maine at this season of the year. The sharp and exhilarating ozone which permeates this region, saturated with the fragrance of the pine and spruce, will do much to invigorate and rejuvenate the worn-out body and the tired mind.

In a beautifully illustrated booklet called "Fishing and Hunting," published by the General Passenger Department, Boston & Maine Railroad, Boston, the game section of Maine is delightfully detailed and pictured. This book will be mailed upon receipt of two cents in stamps.

Mrs. Ballington Booth makes a direct and practical appeal to humanity in asking that public opinion give the discharged prisoner a fairer start. The world looks upon Mrs. Booth's statements with more confidence than those of most reformers, and her belief that ninety per cent. of these discharged prisoners could be made into honest men and women should certainly lead one to give them credit of good intentions. And not give it with a label.

—The total shipments of boots and shoes from Boston this week have been 100,289 cases, against 97,492 cases last week; corresponding period last year, 107,012. The total shipments thus far in 1902 have been 3,476,739 cases, against 3,866,272 cases in 1901.

—Chicago reports receipt car new corn Oct. 22, which inspected no grade on account of dampness and sold for 35 cents. The first received last year was on Oct. 16, inspected no grade and

Poultry.

Practical Poultry Points.

When sending live poultry to market do not send old and young together in the same crate, and still worse is the practice of putting in a few good ones and a few poor ones, or a lot of good fowl and a few roosters together, thinking that the good ones will sell the poor ones. It is the other way every time; the poor ones fix the price and the good ones are sold at it. Nothing is quoted much lower in our markets than what are called "mixed lots," and this is as true of ducklings as of chickens. Put the choice and the common lots in separate crates, if it will not pay to keep the poorer ones for longer and more liberal feeding. If this is not done some shrewd buyer will take them all at a low price, assort them and get a good profit on the best of them, and perhaps take the others home, and by a little shrewd good feeding bring them to market when they will pay a good profit. There are buyers who are as ready to speculate in live poultry as others are in horses or cows.

A poultry man in Petaluma, Cal., reports to the Pacific Rural Press that he kept last year on one and a half acres of ground 365 laying hens as an average for the year. The average production was 123¾ eggs per hen. He sold 3752 dozen eggs, at an average price of 25⅝ cents per dozen, or $963.22 worth. The food cost was $340.46, leaving a profit of $622.76. The average income per hen was $2.64, the average expense ninety-three cents per hen and net profit $1.71. He also run several incubators, and received for chickens and broilers $422, for one hundred pullets $75, and added to stock six hundred pullets worth $377, sold empty grain sacks $15, a total income of $889. Cost of feed and eggs $483.61, profit on hatching and raising $405.39. No help was employed during the year, the labor being mostly performed by himself, with some assistance from his wife. A net profit of over $1000 paid them fairly well for labor.

It is by no means necessary that the poultry house should be damp, and it is unhealthy for the fowl that it should be so. If the dampness is in the floor, or under a wooden floor, there is no remedy, but such precautions as will prevent surface water from running in or under it, and a thorough drainage of the land under it. We know one man who built an expensive house in such a situation that a spring opened up at one end of it. A cold spring is a good thing in a dairy house, but not desirable in a poultry house, yet it would not have been so bad if he had opened it out, stoned it up, and covered it over, then put in a tile drain to carry away the water. But when he tried to bury it with earth he did not succeed. He soon went out of the poultry business.

But moisture often falls from the walls and roofs in the winter. This may be caused the first year after it is built by unseasoned or only partly seasoned lumber. A ventilator at each end under the highest point of the roof would do much to remedy this and to carry off the moisture from the breath of the fowl. It should be high enough to prevent the draught of air from affecting the fowl on the roosts, and either one should be so that it can be easily closed, when there is a strong, cold wind blowing directly toward it. Open doors and windows during the day if the temperature is not below zero, unless snow or rain will beat directly in. Even the damp fog that we get some of these autumn mornings should be shut out. It is nearly as chilling as a cold rain. It may be that it will pay during some of the nights in winter, when it is very cold or wet, to hang a stable lantern up in the house, suspending it by wire as low as possible without danger of having the fowl run against it. This will warm and dry the house to a greater extent than would be supposed.

It is very well to keep the floor of the house well covered with straw, chaff or leaves, and to scatter the grain among them for the hens to scratch out, or to have a scratching shed outside of the house so arranged, but do not allow it to remain too long without taking it out, and renew it as often as it gets soiled or damp, or when it begins to give out foul odors. Remove it to the manure heap and let it rot down with the other manure. Indeed, we would advise putting all the manure from the henhouse with other manure as often as once a week. The nitrogen or ammonia that it contains will add to the value of the other just so much, and it is most valuable in the cow manure which has less of that element than the manure from horses, sheep or swine. The hen manure adds to that just what it needs to warm it up also and decompose the bedding or coarse material that is in it. There are some who think it desirable to save the hen manure for some special crop, but we do not know of any crop on which it can be used as profitably as in the above manner. If kept by itself for special crops it needs much care in handling to prevent the loss of ammonia. It can be done by mixing it daily with dry earth or with land plaster, but we know of no other way.

There are two things that hens and chickens can scarcely have too much of, that is, clear water and clean grit. If they are constantly before them, they will never take enough to injure them, while they cannot keep healthy if deprived of them. In New England, a land of gravel and sand, springs and brooks, we are not apt to think that the hens do not get enough of both grit and water, but where one yard is used for several years, and not a gravelly soil at that, the little particles of gravel may have been used so many times over that they are really worn as smooth as the pebbles that have rolled on the beach in the waves until they are smooth as they could be made. Having lost their rough corners, these particles of gravel have lost their grit or grinding powers. They are not of any value for the hens. Bring a load of clean gravel from some bank and dump it in the yard. Sand is of but little use to old fowl, but will do well for young chickens and ducks. In fact, the old duck seldom takes gravel of any size when she can get clean sand enough. We remember reading a few years ago and think we noted it at the time, that one of the leading duck raisers of Long Island lost many ducklings by using in their food a sand from the beach, which looked clean and white, but which he found afterward had been seasoned with sewage from some nearby city or town. This is why we say use only clean grit.

Some of the poultry papers have been trying to boom the White or Buff Plymouth Rocks or Wyandottes, but a look through our markets will show that they have not become popular with those who keep their poultry to produce chickens or eggs. At least one-half the really good fowl and chickens shown are of the Barred Plymouth Rocks, and a good part of the others are the Silver Wyandottes. And the egg boxes show the varied shades of brown eggs from these two breeds more frequently than the darker brown of the Brahma or Langshan or the white shell of the Leghorn. It may be they get more white eggs in New York, as they prefer them there. The mixed blood in the American breeds prevents getting a uniform shade on the egg shells.

GUERNSEY COW JOSEPHINE.

Horticultural.

Orchard and Garden.

A North Carolina correspondent of the New York Packer writes that the idea of growing strawberries and other small fruits under cloth, which we advocated several weeks ago in these columns, is not a new or untried one. He began it as far back as 1886. The huge strawberries grown by A. T. Goldsborough, which we reported a few years ago, were grown under cloth. They broke the world's record, but we do not now remember how many, or rather how few to the quart there were, about eight or ten perhaps.

The writer claims that not only do the berries grow larger, but there are more of them under the cloth, and the pollenization was absolutely perfect even when only one row in four was of a staminate variety. This was better than he had ever found in the open field, and he saw reason for the difference when he visited the field one breezy day. The wind entering under one side of the cloth made it as billowy as the ocean. It acted like a fan in sending a current of air under and through it, so that the pollen from the staminate blossoms extends through the tent, reaching every other blossom until all were pollenated, reaching every part, so that there were no imperfect or deformed fruit due to only partial pollenization. The cloth protects the vines from any frost short of a hard freeze, and the fruit ripened at least a week earlier. He had known a black frost that froze the ground nearly a half-inch deep to do no injury to the vines or fruit under the cloth, while those outside lost their blossoms and the small fruit that was already set. He puts his cloth on when plant growth begins in the spring and takes it off when picking begins, as he thinks the fruit colors better in the sunlight.

He uses small stakes eighteen inches long, driven one foot into the ground, thus leaving the cloth six inches from the ground These were made smooth at the top, and then a gimlet hole bored at the upper end, a piece of wire six inches long put through and one end bent round the stake, the other being put through the cloth and bent as a hook to hold it. These stakes are placed an inch or two less than three feet apart, the width of the cloth, and not more than fifty-four inches apart in the row. It cost about $150 per acre to fit a field in this way, but the cloth lasted three years, and then would serve as coverings for small beds, while the stakes if housed would last from five to ten years, so that the cost was less than $50 a year.

The Hay Trade.

Prices for hay, and, in fact, the general condition of the hay market, are practically unchanged from that of last week. There is a little scarcity in the best grades, and selections from the next-best grades have to take the place of some orders. The common stock, as is usual, is in a little over supply. However, hay is coming forward well under control, and prices are well maintained. The dealers feel a little uncertain about the volume and quality of the season's crop, and hence are buying in a hand-to-mouth way.

Our reports from Montreal state that the hay market in Canada has turned out quite different from what was expected a short time ago, as some dealers, in view of the large crop that has been gathered in Canada, and the reported heavy crop in the United States, expected values would be much lower than they are at present. Despite the reported large yield in the States, yet New York and Boston men have been large buyers in Canada, and there is no doubt the values have been sustained in a great measure through their outside buying. The trade is still hampered by the scarcity of cars, and the movement of the crop is delayed. A Liverpool buyer has made his appearance in the Montreal market.

The Hay Trade Journal gives the following table, showing the highest prices for hay in the markets mentioned, Oct. 24, 1902: Boston $18.50, New York $19, Jersey City $20, Philadelphia $18.50, Pittsburg $16, Pittsburg prairie $10, Kansas City $10.50, Kansas City prairie $9.50, Duluth $11, Duluth prairie $9, Minneapolis $12, Minneapolis prairie $10, Baltimore $17.50, Chicago $13.50, Chicago prairie $13, St. Louis $13, St. Louis prairie $10.50, Richmond $17.50, Memphis $14, Buffalo $16.50, Cleveland $14.75, Cincinnati $14.50, Washington $17, Nashville $13.75, New Orleans $16, New Orleans prairie $7.50.

The market in Montreal is firm, under light receipts. Bright, sunny weather is scarce in Canada, and it has been one of the seasons on record for making good hay. Prices have kept fairly high, on the basis of $9 to $9.50 for No. 1, $8 to $8.50 for No. 2 and $7 to $7.50 for clover mixed, on cars at Montreal.

In New York city prices are practically unchanged, and the market is fairly steady at quotations. A choice car of large bales would exceed quotations. Many sections report a scarcity of cars, and it is probable receipts by rail later on will be heavier. Hay by boat or barge will soon cease, and it is hardly likely the daily average would increase very much. It would seem then that the market has about reached its level. Receipts for last week were 10,041 tons, of which 3061 tons came in by canal, and 1040 tons came in by river boats. The previous week's receipts were 9622 tons, while for the same week a year ago the receipts were 12,134 tons. The export in bales this week has been 22,033 bales, against 17,477 bales last week.

We have the following from a Western paper, which is quite interesting, as much hay now comes through to New York and even to Boston from far-off points.

Last year, it will be remembered, says the Davenport (Ia.) Democrat, there was a hay famine in the land for the space of a number of weeks. Then the rain came and the grass got green, and the price of hay, which had got to $26 a ton at Kansas City, dropped to $12 or thereabouts, with a suddenness that jarred the market.

The scarcity of 1901 was due to the drought. This year's scarcity has been due to the wet. As a matter of fact, there is any amount of hay in the country, but not much of it grades high. Dampness in the process of curing, discolored before it got to the stack, leached of its sweetness and nutriment, and rendered as stale as a last year's almanac, it is poor stuff; but such as it is there is lots of it.

The article that is scanty in supply is good, fresh, bright, clean, sweet timothy hay. The shippers came so close together all over this grass-growing country last summer, that there was no chance to get a piece of grass down and dry till there was a rain on it.

Fortunate indeed were the men who could mow a four-acre "land" of grass in the morning, and get it into the cock, or the stack, that afternoon, unwetted of the rains that were washing away everything loose. So it happens that good bright hay is just now esteemed as a gift of the gods.

It may happen that good hay will not command a very high price, because the immense quantity of the poor stuff of its kind will tend to keep the price down, but the supply is nevertheless limited, and so limited as to justify a large advance.

Iowa is generally a good hay State, but there is very little Iowa hay in the present receipts at this point, and the prospects for an increase of the amount are not good. There is plenty of Kansas hay, such as it is, and there are some feeders who assert that it is a good thing, but there are a good many, on the other hand, who use it only when they are compelled to, and who say that it is only so much better than nothing.

In spite of the talk of scarcity of hay last year, the country in this part went through the winter with quite a stock of 1901 hay on hand. About all the Iowa hay we have been getting here has been last year's cut. There is little of this year's that is good enough for the trade here. Davenport horsemen are a little particular what they feed.

It is possible that the alfalfa fields of the West may be drawn upon, to some extent, for the feed of this winter, though it is not understood here that there is any great quantity of that article to spare. It is good feed, where the stock is acquainted with it and likes to eat it.

Butter Market.

Although the receipts of butter were light last week, prices did not nominally advance, choice creamery being held at 24 to 24½ cents, although we think more was sold at 24½ cents than a week ago, and if the rain of Tuesday had not kept buyers away, it might have been figured a little higher. There are some who believe that butter has reached its highest point now, and Western quotations are not as high as last week. The moderate weather, and the grass growing in the pastures, help out the market by keeping a better supply coming, but we can scarcely look for this to continue much longer; northern New York large tubs and Western ash tubs did not get above 24 cents that we could learn, excepting in small lots from jobbers. First stayed at 22 to 23 cents and Eastern at 20 to 23 cents, with seconds at 20 to 21 cents.

The West has lost its buoyant tone, and Chicago was quoted yesterday half a cent lower than a week ago. Elgin held the same quotation as last week, with no offerings or sales. New York holds the same price as a week ago, but reports a more quiet trade. The mild weather, no doubt, had something to do with the loss of vitality, but the fact that at all points buyers have been falling back upon the storage reserves shows that there is a desire to use up some of the June surplus before paying any higher rates for the fresh make.

So far as Boston is concerned, it is very evident that owners of butter in cold storage are anxious to move some of it off before the season becomes much older. The total amount withdrawn from storage last week was about 9000 tubs, but about 2000 tubs of fresh were put in, and the net reduction was 7149 tubs. This is a good record for one week, and if receipts continue light, it is safe to count on as much of a reduction or more this week. The consumption appears to be holding up pretty well, and with a real cold spell there would no doubt be a better feeling all round.

The receipts of butter at Boston for the week ending Oct. 25, were 13,813 tubs and 32,375 boxes, a total weight of 709,063 pounds, against 878,956 pounds the previous week and 857,616 pounds the corresponding week last year. This shows a falling off of 169,893 pounds, as compared with last week, and 148,553 pounds compared with last year.

The exports of butter from Boston for the week were nothing, against 44,018 pounds the corresponding week last year. From New York the exports were 275 tubs and from Montreal 44,266 packages.

The Quincy Market Cold Storage Company reports a stock of 208,502 tubs, against 166,867 tubs last year. The Eastern Company holds 45,313 tubs, against 24,259 tubs a year ago. With these added the total stock in Boston is 253,815 tubs, against 191,126 tubs same time last year, an increase for this year of 62,689 tubs. The reduction in stock last week was 7149 tubs. For the corresponding week last year the stock was reduced 5760 tubs.

Guernsey Cow Josephine.

The Guernsey cow Josephine was fed Chicago gluten meal, cottonseed meal, wheat bran, wheat middlings, oat hay and corn silage in varying amounts and combinations so as to form different balanced rations. On Feb. 19, 1901, Josephine was dehorned for class illustration, caught cold and stopped giving her normal flow. This was to be regretted, as she had been selected to try the effect of unlimited cottonseed meal, in gradually increased amounts, in causing garget. The writer knows of no case of garget from cottonseed meal, except where some corn product (gluten, corn meal, corn silage or corn fodder) was fed in connection with the cottonseed meal. The records of Josephine are for the time from Dec. 1, 1900, to Feb. 19, 1901. Chicago gluten meal was fed in amounts of 1 pound and 1.4 pounds per day. It showed favorable results upon the milk flow. A milk yield above the average was obtained when 1.4 pounds (one scant pint twice a day) were fed, and part of the time when 1 pound was fed. Cottonseed meal was fed in amounts of 1 pound, 1.2 pounds and 2.8 pounds per day. It showed favorable results upon the milk flow. A milk yield above the average was obtained when 1 pound, 1.2 pounds and 2.8 pounds (one quart twice a day) were fed.

Wheat bran was fed in amounts of 3 pounds and 4.3 pounds per day. It showed favorable results upon the milk flow. A milk yield above the average was obtained when 4.3 pounds (3½ quarts twice a day) were fed. Wheat middlings were fed in amounts of 3 pounds, 4 pounds and 6.4 pounds per day. It showed favorable results upon the milk flow. A milk yield above the average was obtained when 3 pounds and 6.4 pounds (four quarts twice a day) were fed. Oat hay was fed in amounts of 6 pounds per day. It showed favorable results upon the milk flow. A milk yield above the average was obtained when 6 pounds were fed. Corn silage was fed in amounts of 36 pounds and 40 pounds per day. A milk yield above the average was obtained most of the time when 36 pounds were fed, and below the average when 40 pounds were fed.

As to digestible dry matter, amounts were fed at different times of 19.43 pounds, 20.03 pounds and 21.18 pounds. A milk yield above the average was obtained when 21.18 pounds were fed. Of digestible protein were fed at different times 1.81 and 1.97 pounds. Figures were not obtained sufficient for comparison. Of digestible carbon fats were fed 11.48 pounds, 11.88 pounds and 12.11 pounds. A milk yield above the average was obtained when 12.11 pounds were fed.

The nutritive ratios of the different rations were 1 to 6, 1 to 6.1, and 1 to 6.3. Figures were not obtained sufficient for comparison. It may be concluded that when 1.4 pounds Chicago gluten meal, 2.8 pounds cottonseed meal, 4.3 pounds wheat bran, 6.4 pounds wheat middlings and 6 pounds oat hay, per day, can be properly combined with Josephine's other feed, these amounts will prove favorable to milk production. Josephine's photograph and history are added herewith.

Josephine is a Guernsey cow, dropped March 3, 1898. She gave when new milch 23 pounds milk daily average during the month of October, 1900. She weighed, approximately, 875 pounds.

Josephine shows a bad disposition towards both cows and men. She is not affectionate, does not like to be petted, and is nervous about being carded and brushed. She is known to kick, however, and the removal of her bull-like horns has taken away her chief means of mischief. She is obstinate about leading and drinking, though the latter habit may have been formed when the cold water pained her teeth. She is an unprofitable cow so far as milk goes, at present, but has not had sufficient opportunity to show what she might do if her peculiar fondness for warmed water and rich feed was steadily looked after. She showed good gains in milk with increased grain feed. Her large demands for bran, middlings and cottonseed meal may be due to the fact that she is still growing. She is very fond of wheat middlings, has been known to leave gluten meal, leaves corn silage and corn fodder, and is a moderate eater. Incomplete averages show good results from feeding Josephine feed flour in amounts of 2.4 pounds per day.—Report from Rhode Island Agricultural Experiment Station, Kingston, R. I.

Export Apple Trade.

The total apple shipments to European ports during the week ending Oct. 25, 1902, as given by Chester R. Lawrence of Boston, were 154,343 barrels, including 54,949 barrels from Boston, 38,759 barrels from New York, 4218 barrels from Portland, 48,667 barrels from Montreal and 7950 barrels from Halifax. The total shipments included 81,794 barrels to Liverpool, 30,795 barrels to London, 13,465 barrels to Glasgow and 28,489 to various ports. The shipments for the same week last year were 51,874 barrels. The total shipments since the opening of the season have been 771,907 barrels, against 206,373 barrels for the same time last year. The total shipments this season include 228,539 barrels from Boston, 238,288 barrels from New York, 11,454 barrels from Portland, 267,848 barrels from Montreal and 25,778 barrels from Halifax.

Messrs. J. C. Houghton & Co.'s cable Monday morning to Maynard & Child on the Liverpool apple market reads: S. S. Hanoverian and Merion selling. Sales amount to 31,000 barrels. Many poor quality. Many arriving in bad condition. Prices have declined 37 to 50 cents all round. Demand active for best qualities. Fancy Baldwins $3.25 to $4, No. 1 Baldwins $2.62 to $3, No. 2 Baldwins $1.50 to $1.88. Baldwins in general $2 to $2.50, Kings $2.75 to $4.50, Greenings $1.63 to $2.75, Hubbardstons $1.63 to $3.15.

—The receipts of wool in Boston since Jan. 1, 1902, have been 276,683,359 pounds, against 228,615,034 pounds same period in 1901. The Boston shipments to date are 228,865,870 pounds, against shipments of 209,638,555 pounds for the same period in 1901. The stock on hand in Boston Jan. 1, 1902, was 77,340,463 pounds; the total stock today is 125,157,952 pounds. The stock on hand Oct. 26, 1901, was 94,945,104 pounds. The market is firm with a good, healthy business in progress. Manufacturers are operating steadily and taking large and small lots as their wants dictate. The Melbourne market has opened at fifteen to twenty per cent. higher prices than last year. South American markets are strong with light offerings. In the Melbourne district the clip this year will fall short 150,000 bales of that of last year.

—The exports from the port of Boston for the week ending Oct. 25, 1902, included 73,920 pounds cheese and 147,440 pounds oleo. For the same week last year the exports included 44,018 pounds butter, 82,700 pounds cheese and 92,290 pounds oleo.

—The exports of live stock and dressed beef last week included 1900 cattle, 1750 sheep, 4252 quarters of beef from Boston; 1904 cattle, 125 sheep, 16,612 quarters of beef from New York; 850 cattle from Baltimore; 350 quarters of beef from Philadelphia; 732 cattle, 932 sheep from Portland; 1322 cattle, 1501 sheep from Montreal, a total of 6708 cattle, 4308 sheep, 21,224 quarters of beef from all ports. Of this 4537 cattle, 3828 sheep, 16,925 quarters of beef went to Liverpool; 1070 cattle, 2762 quarters of beef to London; 819 cattle to Glasgow; 202 cattle, 355 sheep to Bristol; 1397 cattle to Southampton; 80 cattle, 125 sheep, 140 quarters of beef to Bermuda and West Indies.

—Exports of dairy products from New York last week were 275 tubs of butter to Liverpool and 1663 boxes of cheese to Liverpool, 500 to London, 463 to Bristol, 1346 to Hull and 476 to Glasgow, a total of 4448 boxes of cheese.

—The lowest price for English wheat frequently occurs at this time of the year. It was on Oct. 15 when the lowest point in modern times was reached for English wheat, in the year 1894, the extreme lowness of price being largely due to inferiority of quality, as is the case in some degree this year. The lowest for cash wheat in Chicago in same month, October, 1894, was 50 cents, and the lowest in 50 years, viz., since 1852, was 48½ cents, in January, 1895. Previous low records were 20 cents in January, 1843, 30 cents in April, 1840, and 31 cents in January, 1852.

—There has been an unsatisfactory market for eggs the past few days and all ordinary grades moved off slowly. For most of the Western arriving 20 to 22 cents has been a full rate, but fine selected lots have been in demand at 23 to 24 cents. The latter are very scarce. Fresh-gathered Eastern ruled at 20 to 23 cents, with extras at 24 to 25 cents, and fancy new-laid at 28 to 30 cents. Still higher prices have been paid for strictly fancy when offered. Refrigerator lots move slowly at 19 to 20½ cents, and 20½ cents is a high-selling price at the close. Receipts for the week were 15,176 cases, against 19,639 cases the previous week and 11,627 cases corresponding week last year. The stock in cold storage is 153,772 cases, against 158,682 cases the previous week, and 121,080 cases same time last year.

—The visible supply at present in America, Europe and Argentina is 135,200,000 bushels wheat and flour, compared with 164,800,000 bushels a year ago, 195,400,000 bushels two years ago, and 174,400,000 bushels three years ago, showing past three years average nearly 178,000,000 bushels, or over 43,000,000 bushels in excess of present total.

—There is still a call for the best hay, with low grades dull and easy. Rye straw is in fair supply, with the request quiet. Millfeed is about steady, with the feeling on the part of consumers that prices are too high, this causing restricted buying. Best hay $19 to $20, No. 1 $17 to $18, low grades $13 and up, rye straw $15 to $16, oat straw $10 to $11, sack spring bran to ship $18.25 to $18.50, winter $18.50 to $19.50, middlings $18.25 to $25, mixed feed $19 to $22, red dog $24.25, cottonseed meal $26.25 to $27.50 for shipment, linseed meal $26.75 to $29.

—Our Plattsburg (N. Y.) correspondent writes under date of Oct 27 that potatoes have advanced in northern Clinton County 20 cents per bushel in as many days, now selling at 55 cents in carload lots. We think the available potato crop is not as large as previous estimates would indicate.

MASSACHUSETTS PLOUGHMAN
NEW ENGLAND JOURNAL OF AGRICULTURE

TELEPHONE NO. 3707 MAIN.

Chorus girls are still more popular at Yale than Mrs. Nation.

Now wouldn't you have liked to be a member of the Italian society?

Will the theatre-going public permit actor James O'Neil to cease claiming the world?

Mayor Jones of Toledo holds the opinion that the President grew up to the coal situation.

American jockeys will soon be able to find their way to the French frontier with their eyes closed.

Isn't it rather late in the day to be finding out that one of King Oscar's advisers may have been not altogether disinterested?

Astrologer Meyer's country is the whole world, both because he is concerned for its welfare and because it doesn't value his prophecies.

When Mr. Robert Green finally enters his chosen calling, it is safe to assume that few will come to scoff where the former pugilist is conducting divine service.

The latest defalcation, although it is a varnish company that suffers by it, looks very like the same old unvarnished story of infatuation and lack of funds.

Campaign excitement in the Sixth District reaches boiling point when one gentleman accuses another of distributing ping-pong sets as a means of influencing votes.

The world breathes a sigh of relief to know that the Castellanes have come to an agreement with their art dealer and can now settle down to enjoy their pictures.

The newspaper correspondent, who has become governor of one of the Philippine provinces, ought to be able to keep pretty well informed as to what is going on in his province.

Although the point was not made quite so specifically, Mr. Joseph Lee apparently holds that one of the chief advantages of a sand heap for children to play with is that it makes them sandy.

If we should ever have a war with Germany, it is comforting to think that the enemy would probably never bombard Boston for fear of hitting the new Germanic Museum in Cambridge.

The liveryman who recently married a Maine girl, and is now claimed by a Massachusetts woman, would probably appreciate the elder Weller's remarks on matrimony, even without experience with "widders."

When a trolley car meets an automobile one naturally thinks of the familiar case of Greek meeting Greek. But the cases are not parallel. In the recent event, for example, the trolley car got the worst of it.

The late Frederic Tudor was responsible for pure air and proper heating in many a Boston building, both public and private; the fact alone should be worth more for the perpetuation of his memory than most monuments.

Rockland is temporarily famous for a wooden wedding the other evening which appears to have been characterized by an appropriately wooden kind of humor. As t used to say in the school reader: "There's nothing like fun, is there? We haven't any ourselves, but we do like it in others!"

The organization of a union among the New Haven messenger boys and the institution of a strike within three days thereafter, gives the lie direct to the popular theory that messenger boys are slower than others. Dare Devil Dick could hardly have acted with more promptness in seizing an opportunity to escape from a band of blood-thirsty redskins.

Paving the streets of Altman, Col., with stone taken from the waste dump of a neighboring gold mine was in a fair way, until the fact was discovered, to give that city a pavement worth $20 in gold to the ton. For a short time Altman was the city of the emigrant's dream, and one could pick up gold in the streets.

Englishmen are willing to admit that it is not so much in the excellence of American machinery that success lies as in the out-turn obtained by that machinery. Nowhere in the world are machines forced to yield such out-turns as in the United States. Labor may be dear in America, but labor could well earn equal wages in England if it would give as great returns in the day.

The inevitable connection between genius and necessity is again brought to light in the recent testimony of Walter Damrosch in the musical libel suit in New York city. Few of the audience who heard "The Magic Flute" last winter probably realized that Mozart wrote it to order for a bankrupt theatrical manager, who had already the scenery, but no opera to go with it.

The law puts little value on the comfort and pleasure of the Massachusetts man who has recently been suing to recover $100 damages for the shooting of his trick cat. The cat, according to the plea of the former owner, "was a source of comfort and great pleasure to him"; but the unfeeling court, even while it established the position of a cat as property, reduced the compensation to a mere $3.

Those who think the shoe trade has left Massachusetts mistake in their reckoning. According to the census of the total product of shoes in the United States amounting to $261,028,580, Massachusetts is credited with a production of $117,115,243 worth, New Hampshire $23,405,558 worth, and Maine $12,295,847 worth. The largest production in the West is noted in Ohio, Illinois, Missouri and Wisconsin.

Grain prices still hold strong, which works against a free outward movement of breadstuffs to Europe, but freights are very low, hence high prices may be sustained in this country. Cotton exports are large, aggregating since Sept. 1 1,071,505 bales, as compared with 749,393 bales for the corresponding period a year ago. It is always the case that the agricultural products of this country are depended upon for the gold to pay our debts in Europe. Without the farmer there could be but little prosperity, even in this great republic.

The apple crop in New England seems to be a very uneven one. Again, there are many sections where immense crops of apples are raised this year, which, however, are of such a poor quality that there is in reality no profitable market for them. The apples needed for the export trade must be of high order, but even in our own city markets second-grade apples meet with but slow and unremunerative demand. The farmer who expects a profit from his apple orchard must give it the same attention he would the production of any other high-grade farm product.

Whatever the decision of the Coal Strike Commission now at work in Washington, we trust the point will be settled that any man who desires to work may have the opportunity, and whether he is union or non-union he shall be unmolested wherever he can find work to do. The union men now expect to force out of work again the non-union men who took the place of the strikers. The whole power of the State, legal and military, should be utilized in giving every man his freedom who wishes to sell his labor.

It is estimated that over one hundred steamships have been chartered in England to bring coal to this country, forty of which are coming to Boston. It is estimated that the cargoes will average about four thousand tons, or in excess of 150,000 tons to arrive during the month of November. This great influx of steamships is demoralizing the outward freight market. A charter is noted of a steamship from Boston with 175,000 bushels of grain, for Hamburg, at the lowest rate upon record. Even lower rates are feared as the arrivals of the extra steamships increase. This state of affairs ought, however, to advance the value of grain in this country, as the cost of shipment to Europe is so slight.

Raising Beans to Dry.

The consumption of dried beans and peas in this country is enormous, but in spite of the millions of bushels annually used we import nearly every season hundreds of thousands of Scotch and English dried and soup beans. New York State dried beans have for years had the reputation of being the best, and New York choice marrows, medium and pea beans are without equals. Just at present there are few available choice beans in market—that is, of last year's crop—and the prices quoted in the New York market indicate something of the nature of profits accruing to somebody. Thus choice State marrows are selling at $2.85 and $2.90 per bushel; choice red kidney beans at the same price. Of course there was a loss in these beans through shrinkage and damage by insects, but I have always found that it pays better to hold the dried beans until the end of the season. With proper storage facilities and a little care in looking after insects, it is possible to hold the beans indefinitely for high rates. The varieties of beans which have a steady market demand in the cities are the marrows, medium, pea, red and white kidneys, yellow eye, lack turtle soup and California lima beans. We import mostly Scotch green peas and English medium beans.

A great many bean growers use different varieties of beans which have received some local reputation, or which do well on their particular soil. This is all right if one has a market for them, or is raising them to sell as string or fresh green beans. Otherwise it is more to the purpose to accept the kind of beans which have a vogue in the market. With the right soil and seed and a due amount of care and intelligence in cultivating, a farmer should be able to raise marrow, medium or kidney beans on a wholesale scale at a satisfactory profit. The crop is one that keeps well, and I have held a crop over two seasons when the market was glutted, and finally obtained a price for them that made me realize a fair profit Had I sold when the market was glutted, some speculator or storage house company would have made the profits which were due me. I should not recommend any one to enter this business unless the farming land is cheap and adapted to bean culture, and proper storage facilities were arranged beforehand.

Essentials of a Successful Farmer.

The object of this paper is in line of suggestion which may be an impetus to more thoughtful consideration of the various conditions surrounding the farmer rather than a solution in detail of every man's personal perplexity.

Believing that the farmer has the right, yes, bounden duty, to be a whole man, a broad man, symmetrical in development in as many respects as any man who possesses the unmeasured possibilities of life on God's green earth, it seems fitting to treat the subject under two heads, namely, General and Personal Needs.

General Needs: First, the Man—He needs personal qualifications for his business. The day has past when the boy who remains after the preacher, the lawyer, the doctor or the mechanic and business man have been picked out is good enough to keep for a farmer.

There was a time when this was the usual rule in many of the older sections of the country, though that is not saying the father's judgment was always as unerring as he thought, and sometimes the boy picked out for the farm proved capable to call the tabs on those sent out to dwell in high places.

But where it did prove as intended, it also proved an insult thrown in the face of nature, which she resented by returning it with her compliments and a diploma which had for its perspective a panorama of slovenly practice, tumble-down houses, deserted farms, with desolation and failure written on all about, and close by the guide post pointing to the poorhouse.

He must have brains, judgment, business ability, thrift, independence in thought and action, studious habits, original in idea, with good executive ability, and a strong faith in the promise of the Almighty that seed time and harvest shall not fail, and a belief that the laborer is worthy of his hire.

A larger diversity of these qualifications is needed in the fundamental makeup of the farmer today than in the man of almost any other business. And wherever you find an eminently successful farmer, you will find these characteristics.

Second, the Other Half—He needs a good wife. Like the first farmer Adam, he may not always want her to pick apples, but he wants her just the same. Woman is a valuable helpmeet to all classes and in all kinds of business, but in none is she more intimately associated with the details of every day practice that make for success or failure than here, and next to the farmer himself she is the most important factor.

She should be capable, broad-minded, possessed of business tact, ambitious yet frugal, a lover of nature, a lover of children, and a willing mother to a family of reasonable size. History proves, and the present verifies the fact, that the men and women who have climbed the highest round of the ladder of fame and achievement, as a rule, had their early training on the farm.

Hence, what a responsibility rests on the farmer of today and his good wife, as progenitors of efficient men and women, who may fill the ranks of workers as present incumbents vacate their positions.

Third, Status—He needs more confidence in his business. He must believe that he has just as good a business as any other man, and that if he devotes the same degree of tact, push and principle to it, his balance sheet (and he needs one as much as any business man) will show well beside the average of any ten or thousand he may pick for comparison.

Many a farmer would be surprised to know how few business men own their homes, even among those he almost envies, because of their favored circumstances. He can but expect others to think unfavorably of a business of which he himself speaks deprecatingly.

Fourth, Public Life—He needs to get into public life enough to know which way the needle points, and if there is a loadstone near to protect the compass or get his share of the load. He needs to remember the law-making bodies in order that they may remember him. It seems very inconsistent for a man to complain of the negligent way his interests are treated at the State or national capital, when all the interest he manifested is to forget the caucus, or to vote a ticket bearing names of men he cannot remember after election day, but for the local paper which his neighbor takes, and he borrows.

He needs to command respect, then it will be more quickly secured when necessary to demand it.

He should know if he wants the reciprocity bill, the ship subsidy bill, the electric-road bill, the irrigation bill, or any other important measure that is presented, passed; or a change in the system of taxation, interstate commerce laws and other reform measures or not, and why.

It is not the purpose of this subject to elicit the pros and cons of any measure proposed, for its object is more of an abstract than argumentative nature, neither is it our office in this connection to state as conclusions what at most must be considered only opinions.

They are all important to the farmer, however, and need his most careful and studied attention, that he may know the bearing of all such State and national questions on his interest, and may be able to decide intelligently for or against.

It is not for the legislator to inform him, but that he should instruct the legislator what he wants if he would keep abreast of the times. But how shall he avoid being led if he is not prepared to lead.

A successful representative sounds his constituency to learn their desires, hence those prepared to state their position and wishes are said to get what they want. It is also the need, yes, duty of the farmer, to elect this kind of a man.

However, we can not compel a man in California to accept a measure, simply because we want it in New England, unless we can muster more power than he. And we need to accept the fact that often more time, expense and argument are devoted to deciding this same question of power than is given the merit of the measure.

Hence, we need to know our resources and the weakness of the opposition, that we may command our forces accordingly, lest we enter the fight prematurely and find our Waterloo.

It is not a legitimate need, in the sense of this subject, that we should tell the farmer how to decide important questions, but it is essential that he should be prepared to decide for himself and back it up with valid reasons.

It is generally conceded that the farmer pays too large a share of the public taxes. If so, he needs to agitate the matter, and see that the wrong is righted. The remedy is to be determined by the local symptoms of the disease. It is no matter of underhanded wire-pulling, but straight business, to look after these affairs through proper and public channels. It will lend much more prestige to our cause than to get behind the stove in the corner-grocery and kick.

Fifth, Transportation—It has become a question of need to the farmer that better means of transportation be secured, both for himself and his products. But we can't get it alone by demanding it. We can only provide it or encourage the investment of capital for its provision.

There is not now, and never has been except perhaps in war times, any tax that equaled or exceeds in burden the tax of moving a load.

Many a farmer who does not raise $1000 worth of products on his farm per year keeps a team, at an annual expense of $200, besides the capital invested, to move that amount of products, and then adds to what products he ships to city markets twenty-five per cent. of the selling price for railroad freights. So he pays twenty per cent. for transportation on what he uses on the farm, and forty-five per cent. on what goes to market. It may be suggested that this team is used for other farm operations. True, but you will usually find more teams than I have mentioned which must have credit for something, and a man with the team.

It is a fact that a two per cent. municipal tax rate is eliciting ten times the attention from the average taxpayer that the payment of a twenty per cent. transportation tax receives, and often when an additional one per cent. on the municipal, judiciously expended, would reduce the transportation tax thirty-three per cent.

The time is at hand when we must meet this question face to face. The public need of the farmer in this respect demands better roads, wagons with wide rims, ball-bearing axles, the elimination of hills from the highways by a cut through or detour, which in many instances will reduce the expense of transportation to a particular town fifty per cent., for it is always the hardest grade that determines the measure of the load.

Also, the adaptation of some power other than animal for greater dispatch in performing this important feature of our service, and relief is more likely to result from some motor-car, fitted to make regular trips on our public highways by a more perfected system of the automobile, than by a universal extension of the electric-railway throughout our country towns. The farmer needs to be awake to this subject.

Sixth, Educational—All of the preceding divisions have had more or less in common with this, as must also our consideration of personal needs, still it seems to lean heavily toward the side of general welfare, and must include much of a social nature. The farmer needs to give this more consideration, as its effects are too far reaching to be ignored, even when he may consider it a family affair.

Many a boy has left the farm in disgust because his parents refused to favor needed simple changes by way of improvement, from wilful ignorance of value of such betterment in method, when, if they could have entered into an intelligent discussion of the subject and given some credit to his wakening judgment, he would have remained. Such ignorance is inexcusable.

We may not need in the older sections of our country new schools, but we need the hearty support of what we have, yet the crying need among American citizens is for boys and girls to fill the schools.

We pity the married couple, thirty years of age, who without some God-given reason can say they have no children without a tinge of regret.

Here is need of education. And these same people are permitting greater injury against the American nation than all the "trusts" combined.

We need social opportunities, and the farmer needs to recognize this fact, and provide suitable means for proper satisfaction while his farm is in his control.

He needs a reliable daily paper as well as his farm journal, and the extension of rural mail delivery is making this everywhere possible.

He needs to bring up his sons and daughters so instructed that they will consistently and affectionately join hands and hearts in the full mission of men and women. Thus he will perpetuate the happy home, which is the living secret of all our progress as a nation, and the key to the supply of all our needs, and thus he will cheat the divorce court of its game and shame.

In future, more than ever, his success will depend on his skill, ability and integrity in pursuing his occupation, Hence, he needs to take more interest in our agricultural colleges and their management, and render them such support as they deserve in an effort to lay a better foundation for success by the agricultural classes.

And, withal, the whole nation of farmers needs a constructive policy, which will, we believe, follow so closely upon the course of educational progress that it will be inseparable. He should not strive to strangle his efforts for improvement all through life so that they shall die and be buried in the same casket. If his farm is growing better and his home more attractive every year, he will have no trouble to get a son to stay on the farm.

Next we consider his personal needs, or those which deal more especially with local or individual interests. We would speak of "trusts" first under this head, for the fear of them is much more personal than general.

We believe, on the whole, some men are trying to work the farmers and laboring men into needless furor over them. If unscrupulous, they are most likely to work their own destruction. The farmer needs to take some lessons from them to apply to his own personal affairs. If they plan some far-reaching scheme they don't advertise it in the press beforehand. We want to get on to our own business, and introduce into it some of the sagacity they exhibit.

If it pays to send a man to Asia to sell steel, why not the farmer's pool interests, and send a man to sell corn, or West to sell apples, or East to sell California fruits. Why wait for buyers to come to us with smooth misrepresentations, when we can have a man on the ground and wire us the truth.

The farmer needs to put more capital into his business. If he has a hundred dollars to invest, better be his own banker and let alone wild-cat schemes. Work on a larger scale. Have enough for your family and a surplus, and not always be buying to supply a shortage.

Live within your income or means. Don't be stingy, do more and have more. Don't be a slave to a wealthy neighbor's fashion. Comfort and freedom from worry is the greatest criterion of fashion. Get in debt only for accumulative property and necessities. If you get in debt for nothing, you will likely always have nothing. Do more head work and rest your feet. Get rid of jealousy; it is a moth that will eat up your own prosperity. We need to put on glasses if we can't see out of our own neighborhood.

Get in love with your work. Some farmers are too content, they need to wake up. Put on a neat business suit when you go to town, and not advertise as the slouch of the county. Stop choosing phantoms and follow something tangible. Get a library for your home and read the agricultural papers and leading magazines, and be happy, not only, because you are the cultivating class but the cultivated people as well.

HACKNEY MARES.

Bosomed in your green hills alone
A secret nook in a pleasant land.

One great by-industry of a beet-sugar factory is cattle feeding. Thousands of head of fine steers are fattened in the pens adjacent to the Rocky Ford factory on alfalfa, sorghum and the beet pulp after the sugar is extracted. Seven entire carloads of steers from this factory topped the Kansas City market in price for thirteen years.

The steers weighed 1200 and 1400 pounds. Dairying also forms an important by-industry to beet-sugar growing. Where the pulp can be hauled back to the farm it can be fed with great profit to milch cows.

The farmers of Rocky Ford feel safe in the sight of the black stack of the factory pouring out its clouds of inky smoke from $250 worth of coal a day. It represents a million-dollar insurance to them, and furnishes them a certain opportunity to market a sure crop, the price of which they can depend upon. Then by rotating they can raise alfalfa and stock or canteloupes, or half-dozen other products which thrive in the valley.

The magnificent water supply of Colorado Springs comes from snow-clad Pike's Peak, looming up fourteen thousand feet, and to the westward. A natural storage basin high up in the mountains catches the waters from the rains and melting snows of the surrounding slopes, and it is then piped down to the city, thousands of feet below—water clear as crystal and cold as ice. Nothing can ever befoul this water supply, since it originates in uninhabitable, if not inaccessible, slopes and gorges.

What Mr. Fairenild considers his most important find during his last far Eastern tour is a seedless grape fruit (*pomelo*), from Siam. This tree would not come true to the seed, so it was necessary to ship the young plants in a Wardian case. They arrived after their long voyage in excellent condition, and are now growing in the department greenhouses. Mr. Fairchild has an idea that this splendid fruit may supplant all other kinds of grape fruit, or, at least, be as important an accession to our fruits as was the Navel orange. And now what is a Wardian case? In order to send living plants a long distance by sea, and protect them from the salt air and spray, which might be fatal to them, the plants are potted and put into the bottom of a small house with a glass top. This is hinged to allow watering. The whole case is netted to keep out rats. It is, in fact, a small portable greenhouse. The Wardian case enabled the Department of Agriculture to secure valuable plants which it could not otherwise have saved. They tell of a Japanese gardener, who in the old days was engaged by the Mikado, and spent ten years of effort before he successfully introduced a particular breed of orange from China into certain provinces in Japan. The Japanese, Mr. Fairchild says, are now erecting a monument to this gardener. Strange, that with the Mikado's exchequer behind him, he did not construct some sort of a Wardian case. Perhaps he was more anxious to keep his job alive than he was the plants. Such things have been known even in our time and in the United States, and they are probably not new to the Orientals.

The Markets.

BOSTON LIVE STOCK MARKETS.

ARRIVALS OF LIVE STOCK AT WATERTOWN AND BRIGHTON.

For the week ending Nov. 5, 1902.

	Cattle	Sheep	Shotes and Suckers	Fat Hogs	Veals
This week	2698	12,452	50	24,438	1982
Last week	5065	15,506	95	25,621	2094
One year ago	3436	15,007	285	25,596	1812

Prices on Northern Cattle.

BEEF—Per hundred pounds on total weight of hide, tallow and meat, extra, $6.75@7.50; first quality, $5.50@6.00; second quality, $4.50@5.00; third quality, $4.00@4.25; a few choice single pairs, $9.50@10.00; some of the poorest bulls, etc., $3.00@3.50. Western steers, 4½@8½c.

MILCH COWS—Fair quality $30.00@48.00; choice cows $50.00@68.00.

STORES—Thin young cattle for farmers: Yearlings, $15@25; two-year-olds, $18@32; three-year-olds, $28@48.

SHEEP—Per pound, live weight, 2½@3c; extra, 3@4½c; sheep and lambs per head in lots, $2.50@5; lambs, $3.50@5.50.

FAT HOGS—Per pound, Western, 6¾@7c, live weight; shotes, wholesale —; retail, $2.25@8.00; country dressed hogs, 8½@8¾c.

VEAL CALVES—4@7c ₱ lb.

HIDES—Brighton—7@7½c ₱ lb; country lots, 6½@7c.

CALF SKINS—60c@$1.50; dairy skins, 40@60c.

TALLOW—Brighton, 4@5c ₱ lb; country lots, 2@3c.

PELTS—40@85c.

	Cattle.	Sheep.
Maine. At Brighton.		
Libby Bros	35	
P A Berry	36	
Thompson & Hanson	19	170
Harris & Fellows	36	460
E E Chapman	6	
M D Holt & Son	14	
F W Wormwell	6	
Libby & Gould	5	
Geo Lowell	24	300
New Hampshire. At Brighton.		
A C Foss	35	72
At N E D M & Wool Co.		
A F Jones & Co	14	
E F Addin	38	
At Watertown.		
Breck & Wood	27	30
W F Wallace	80	28
Vermont. At Watertown.		
A Williamson	18	
Fred Savage	29	130
H N Jenne	4	13
B F Combs	200	
J Burnes	6	
G W Hall		135
G H Sprigg	13	
E E French		208
B P & P Co.		70
At N E D M & Wool Co.		
Roeder & Keene	20	
W A Ricker	188	700
M G Flanders	19	275
F S Atwood	14	20
F Ricker & Co.	25	600

	Cattle.	Sheep.
At Brighton.		
J S Henry	12	
Canada. At N E D M & Wool Co.		
N E D M & Wool Co.	71	5625
R. I. and Ct. At Brighton.		
E M Granger	8	
Massachusetts. At Watertown.		
J S Henry	22	2
W A Bardwell	16	14
O H Forbush	36	
W F Dennen	3	
At Brighton.		
J S Henry	73	
H A Gilmore	19	
Scattering	105	
R Connors	21	
C D Lewis	5	
D A Walker	10	
J P Day	15	
M F Austin	30	
Western. At Brighton.		
J J Kelley	109	
S S Learned	48	
Sturtevant & Haley	180	
Swift & Co.	288	
Morris Beef Co	252	
J A Hathaway	24	
At N E D M & Wool Co.		
N E D M & Wool Co	270	3600
At Watertown.		
J A Hathaway	200	

Live Stock Exports.

It would appear that there were more cattle of not the best kind on the English market. Prices a week ago by cable at 12@13½c, d. w., while latest range 11½@14c, d. w., showing that best grades are ½c higher and other grades ¾c (d. w.) lower. A light export trade for the week, with only 1156 cattle and 16 horses from this port.

Shipments and destinations—On steamer Armenian, for Liverpool, 394 cattle by Swift & Co., 259 do. by Morris Beef Company, 16 horses by E. Snow; on steamer Chicago, for London, 253 cattle by Morris Beef Company, 179 State and 71 Canada cattle by Swift & Co.

Horse Business.

The market in better shape than a week ago. The demand has improved and more inquiry for business horses. Truckmen are busy and must have horses of good quality. Truck horses at $150@250, chunks at $125@175, common horses at $40@90. At Moses Colman & Sons a good week for all descriptions; sales from $25@190 covered the general sales. A large call for saddlers and ponies at $120@225. At Isburgh & Co.'s sale stable a good week's sale, handling some fine grade horses, together with some for general business, also common lots on sale; general range, $35@250. At Cavanaugh Bros.' sale stable a fair sale of heavy horses, $150@250.

Union Yards, Watertown.

Tuesday—The market for beef cattle favorable to the buying interest. It was thought last week that cattle was selling at low figures, that is, the lower and fair grades of cows, heifers, etc.; good dressing beeves steady in price. O. H. Forbush sold 2 cows for beef, of 1860 lbs, at 3¼c; 1, of 1340 lbs, at 3½c; 2 cows, of 2100 lbs, at 3c; 2, of 1850 lbs, at 2¾c; with sales at 2¼@2½c. J. A. Hathaway sold 40 steers, of 1500 lbs, at 7½c; 30 do., of 1450 lbs, at 7c; 25 do., of 1425 lbs, at 6¾c; 20 do., of 1400 lbs, at 6c.

Milch Cows.

Very fair arrivals were yarded, some of which were choice in quality. Sales of 20 choice cows, by W. Cullen, at $60 a head; 5 cows at $50 a head, while cows that arrived would not bring over $30.

Fat Hogs.

The market exactly as last week, with Western at 6¾@7c, l. w. Local hogs, 8½@8¾, d. w.

Sheep Houses.

Market easier by ½c ₱ lb, and the demand quite moderate. The best arrivals were with the Western herds. Canadian came nearly up to Western. The former cost laid down here, sheep at $2.30@4.30 ₱ 100 lbs, and lambs at $3.30@5.80 ₱ 100 lbs. R. E. French, 28 lambs, of 1320 lbs, at 4c; 60 do., of 3740 lbs, at 4c; 22 sheep, of 2030 lbs, at 2¾c; 71 do., of 7950 lbs, at 2¾c. G. W. Hall sold 91 choice lambs, of 6589 lbs, at 5c; 46 do., of 3310 lbs, at 5c.

Veal Calves.

No material change in price; 7c obtained where the quality would warrant paying that price, down to 4c a fair call. N. H. Woodward, 15 calves, 2030 lbs, at 7c. H. N. Jenne, 130-lb calves, at 7c. B. W. Hall sold calves at 6c and 4c.

Live Poultry.

Best price paid at yards, 10½c in crates; mixed lots, 9½@10c. Nice pullets selling at 50@60c.

Droves of Veal Calves.

Maine—Libby Bros., 60; P. A. Berry, 40; Thompson & Hanson, 55; Harris & Fellows, 85; E. E. Chapman, 5; M. D. Holt & Son, 30; F. W. Wormwell, 6; Libby & Gould, 23; George Lowell, 30.

New Hampshire—A. C. Foss, 16; A. F. Jones & Co., 131; Breck & Wood, 80; W. F. Wallace, 140.

Vermont—A. Williamson, 50; Fred Savage, 85; H. N. Jenne, 20; W. E. Hayden, 16; G. W. Hall, 25; G. H. Sprigg, 3; B. P. & P. Co., 33; Roeder & Keene, 25; W. A. Ricker, 200; M. G. Flanders, 115; F. S. Atwood, 25; F. Ricker & Co., 200; J. S. Henry, 21.

Massachusetts—J. S. Henry, 164; W. A. Bardwell, 25; O. H. Forbush, 3; H. A. Gilmore, 23; Scattering, 150; R. Connors, 17; C. D. Lewis, 4; D. A. Walker, 26; J. P. Day, 20; M. F. Austin, 22.

Brighton, Tuesday and Wednesday.

Stock at yards: 1385 cattle, 1002 sheep, 20,303 hogs, 727 calves, 120 horses. West, 901 cattle, 20,100 hogs, 120 horses. Maine, 171 cattle, 930 sheep and lambs, 334 calves, 204 hogs. New Hampshire, 35 cattle, 72 sheep, 50 hogs, 16 calves. Vermont, 12 cattle, 1 hog, 21 calves. Rhode Island and Connecticut, 8 cattle.

Tuesday—The arrivals of the week were 1385 cattle from all the New England States and the West. The movement in cattle for beef was somewhat slow and weak in price. Butchers were buying light, as many had their supply direct from the West. It was expected, now that the Jewish fast is over, that common to fair grades of cattle would be firmer, but such was not the case. J. W. Ellsworth, 14 cows, of 12,240 lbs; 2 bulls, of 2700 lbs, at 2½c. J. P. Day, 6 cows, av. 900 lbs, at 2½c. E. E. Chapman sold 2 steers, of 2650 lbs, at 4½c. Libby Bros. had in and sold 1 pair of oxen from John Ward's farm of Thorndike, Me., of medium grade, of 3000 lbs, at 5¼c.

Milch Cows.

Just a fair trade, no excitement at the yards. All sorts and qualities were on sale at a wide range in prices as quoted. The better grades were selling shortly after their arrival at $50@65. F. W. Wormwell sold 3 milch cows, of extra quality, at $45 each. Libby Bros. sold on commission, some at $60, $55 and $50, being choice in quality; 10 cows at $40@45, down to $30.

Veal Calves.

Market value unchanged. The supply about the same as last week, near to 2000 head. F. W. Wormwell sold calves, of 110 lbs, at 6c. E. E. Chapman sold 105-lb calves at 6½c, with sales at 6¼c, 6¾c, up to 7c.

Late Arrivals.

Wednesday—Less milch cows on the market and light run from Maine. The better grades of new milch cows found ready disposals early in the day, and sales were fairly good for medium grades. Common cows slow of sale. Beef cows of slow sale at ¼@½c decline. Dealers say the trade was sluggish. O. H. Forbush sold 7 cows at 3¼c, of 6970 lbs. J. T. Molloy sold 3 fine cows, $155 the lot; 1 at $45; 1 at $35. Libby Bros., 2 choice cows at $65 and $55, with various sales at $30@50; these cattle are sent in to sell on commission. J. S. Henry sold likely cows at $50@60; 10 cows at $35@45. W. Scollans sold 5 cows, $54 each; 2 at $50 each, with sales at $45@47.50 each. W. Cullen, 10 cows, at $45 each.

Store Pigs.

A light demand. Small pigs, $2.50@4. Shotes, $5.50@8.

BOSTON PRODUCE MARKET.

Wholesale Prices.

Poultry, Fresh Killed.

Northern and Eastern—	
Chickens, choice roasting	16@18
Chickens, fair to good	12@15
Chickens, broilers, 2 lbs each, ₱ lb	16@17
Green ducks	14@16
Green geese	14@15
Fowls, extra choice	14@
" fair to good	12@13
Pigeons, tame, choice, ₱ doz	1 50@
" com to good, ₱ doz	75@1 25
Squabs, ₱ doz	2 00@2 50
Western iced or frozen—	
Turkeys, com. to good	10@12
" fancy spring	13@14
Broilers, good to choice	14@15
Chickens, common to choice	10@13
Fowls, good to choice	11@12½
Old Cocks	9@9½

Live Poultry.

Fowls ₱ lb	9@10
Roosters ₱ lb	7@8
Broilers ₱ lb	9@10

Butter.

NOTE—Assorted sizes quoted below include 20, 30, 50 lb. tubs only.

Creamery, extra—	
Vt. & N. H. assorted sizes	24@24½
Northern N. Y., assorted sizes	24@24½
Northern N. Y., large tubs	24@
Western, large ash tubs	24@
Western, asst. spruce tubs	24@24½
Creamery, northern firsts	22@23
Creamery, western firsts	22@23
Creamery, seconds	20@21
Creamery, eastern	20@23
Dairy, Vt., extra	22@
Dairy, N. Y., extra	21@
Dairy, N. Y. and Vt. firsts	19@20
Renovated	18@20
Boxes—	
Extra northern creamery	24½@25
Extra dairy	22@23
Common to good	19@21
Trunk butter in ½ or ¼-lb prints—	
Extra northern creamery	24½@25
Extra northern dairy	23@
Common to good	19@21

Cheese.

Vt. twins, new extra ₱ lb	12¼@12½
" firsts ₱ lb	11@12
" seconds ₱ lb	8@10
Sage cheese, ₱ lb	12½@13
New York twins new extra	12½@
" " " " firsts	11@12
" " " " seconds	8@10
Ohio flats	10½@11½

Eggs.

Nearby and Cape fancy, ₱ doz	30@32
Eastern choice fresh	25@26
Eastern fair to good	20@23
Michigan fancy candled	23½@24
Vt. and N. H. choice fresh	25@26
Western fair to good	19@21
Western selected, fresh	22@23
Western dirties	15@17
Refrigerator—April	20@
" Summer	18½@19½

Potatoes.

Hebron, ₱ bu	65@68
New York, round white	63@65
Western, " "	60@
Aroostook Green Mountains	68@70
Sweet potatoes, yellow—Southern	1 50@1 75
Jersey double head	2 00@2 50

Green Vegetables.

Beets, ₱ bu	50@60
Cabbage, native, ₱ 100	2 00@4 00
Carrots, ₱ bu	50@60
Parsnips, ₱ bu.	75@85
Lettuce, ₱ doz	50@75
Celery, white, ₱ doz	50@75
" Boston market	1 25@1 50
Cucumbers, hothouse, each	7@8
Onions, Natives, ₱ bu.	75@1 00
" W. Mass. ₱ bbl	1 25@2 00
" Spanish ₱ crate	2 00@
Peppers, ₱ box	90@1 00
Egg plant, ₱ doz	2 00@2 25
Parsley, ₱ bu	25@35
Radishes, ₱ box	65@75
Squash, ₱ crate	1 50@1 75
" Marrow, ₱ ton	10 00@12 00
" Turban	15 00@
" Hubbard, ₱ ton	12 00@20 00
String beans, so., ₱ ⅓-bbl. bskt	1 25@1 50
Lima beans, ₱ box	2 75@
Sieva beans, ₱ box	2 25@
Spinach, native, ₱ box	25@35
Turnips, flat, ₱ box	40@50
Turnips, yellow, ₱ bbl	1 00@1 25
Tomatoes, native, ₱ box	1 50@2 00
Cauliflower, 8 in a box	90@1 00

Domestic Green Fruit.

Apples, Twenty-Ounce, ₱ bbl	1 50@2 00
" Gravenstein, ₱ bbl	2 50@3 00
" common, green, ₱ bbl	75@1 25
" Snow and Wealthy	2 00@3 00
" Maine Harvey	1 75@2 25
" Pound Sweets	1 50@2 00
" Hubbardston ₱ bbl., No. 1	1 25@2 00
" Greenings	1 25@2 00
" King, ₱ bbl	2 25@2 75
" Pippins and Porters	1 00@1 50
" Juneating and Colverts	1 25@1 50
Pears, Seckel, ₱ bu	2 50@4 00
" Anjou, ₱ bu	1 00@2 00
" Clairgeau, ₱ bu	1 00@2 00
" Bosc	3 00@3 50
" Sheldon	1 00@2 00
Quinces, ₱ bu.	1 75@2 25
" " bbl	4 00@4 50
Grapes, ₱ pony basket—	
Vergennes, western N. Y.	14@15
Catawba, western N. Y.	10@12
Salem, western N. Y.	12@14
Concord, western N. Y.	10@12
Niagara, western N. Y.	14@18
Isabella, western N. Y.	8@10
Concord, western N. Y., 8-lb bskt	18@19

Hides and Pelts.

Steers and cows, all weights	6¾@7
Bulls	6¾@7
Hides, south, light green salted	8@8½
" " dry flint	13½@14½
" " salted	9@10½
" buff, in west	8@9½
" " salted ₱ lb	8@9½
Calfskins, 5 to 12 lbs each	90@1 60
" over weights, each	1 80@2 10
Deacon and dairy skins	50@60
Lambskins each, country	35@50
Country Pelts, each	40@85

Dried Apples.

Evaporated, choice	6@7½
Evaporated, prime	6½@6¾
Sun-dried, as to quality	3@4½

Grass Seeds.

Timothy, ₱ bu., Western, choice	2 55@
" prime	2 10@2 25
Clover, ₱ lb	13@13½
Red Top, Western, ₱ 50 lb sack	3 00@3 50
" fancy recleaned, ₱ lb	9½@11½

Beans.

Pea marrow, choice, H. P.	2 45@2 50
Pea screened	2 20@2 40
Pea seconds	2 00@2 10
Pea foreign	2 25@2 40
Mediums, choice hand-picked	2 45@
Mediums, screened	2 20@2 40
Mediums, foreign	2 25@2 40
Yellow eyes, extra	2 90@3 00
Yellow eyes, seconds	2 60@2 80
Red Kidney	3 10@3 25
Lima beans dried, ₱ lb	8@

Hay and Straw.

Hay, No. 1, ₱ ton	17 00@17 50
" " 2 "	14 00@16 00
" " 3 "	12 00@14 00
" fine choice	12 00@13 00
" clover mixed ton	12 00@13 00
" clover, ₱ ton	12 00@12 50
" swale, ₱ ton	9 00@10 00
Straw, prime rye	12 50@14 00
Straw, oat, per ton	8 50@9 50
Straw, tangled rye	10 00@11 00

FLOUR AND GRAIN.

Flour.—The market quoted quiet.
Spring patents, $4 15@5 00.
Spring, clear and straight, $3.25@3.75.
Winter patents, $3 85@4 50.
Winter, clear and straight, $3 45@4 25.

Corn Meal.—The market is lower at $1 35@1 37 ₱ bag, and $2 95@3 00 ₱ bbl; granulated, $3 30@3 65 ₱ bbl.

Graham Flour.—Trade continues quiet, with the market quoted at $2 80@4 00 ₱ bbl.

Oat Meal.—Lower, $5 60@5 80 ₱ bbl. for rolled, and $6 00@6 20 for cut and ground.

Rye Flour.—The market is quoted at $3 05@3 50 ₱ bbl.

Corn.—Demand is quiet, with prices still lower.
No. 2, yellow, spot, 68@70½c.
No. 3, yellow, 67@67½c.

Oats.—Prices firm.
Clipped, fancy, spot, 40½c.
No. 2 clipped, white, 37½@38c.
No. 3 clipped, white, 37@37½c.

Millfeed.—In fair demand and firm.
Winter wheat, bran sacks, $19 00.
Winter wheat, middling sacks, $21 00@22 50.
Spring wheat, bran sacks, $17 75.
Spring wheat, middling sacks, $17 75.
Cottonseed meal for shipment, $26 50.

Malt.—The market is steady with trade ruling dull.
State grades, 6-rowed, 67@75c.
State, 2-rowed, 63@68c.
Western grades, 70@76c.

Barley.—Quiet demand, with prices higher at 62@73c for No. 2 6-rowed State, and 48@65c for No. 2 2-rowed State. Feed barley, 52@67c.

Rye.—Quiet, $3.00@3.50 ₱ bbl, 68c ₱ bushel.

THE WOOL MARKET.

Unwashed fleece, fine, Michigan	20@
" " " Ohio	21@22
" " ½-blood "	22@23
" " ⅜-blood "	22@23
" " ¼-blood "	22@23
Fine delaine, Ohio	31½@32
" " Michigan	28@
Washed fleece	26@30

RYE AS FOOD FOR STOCK.—E. M. B., Franklin County, N. H.: We were not taught when young that rye was a good food for stock of any kind, though we have many times eaten rye bread or biscuit or a pudding made of rye flour, but we were not fond of it. But it was thought to have but little value either for milk production or for fattening purposes. In tests made in Germany, it was found that rye meal was lacking in fat, and it produced very little effect on the milk production when used in connection with clover hay. It did not prove equal to either malt dust or oat meal when given with a mixed roughage of clover and straw. The butter was more firm when the rye was used than when the oat meal was used, but was not as yellow. They advise using oil meal with it if given to milch cows. When it was fed to sheep and swine it was not as thoroughly digested as oats or barley, and if a full ration of rye was given the swine often refused to eat it, and they thought it could not be successfully given in large amounts or its use long continued, as it is not as easily digested as the other grains. For horses they decided that the rye was better digested and better relished if it was soaked before feeding, but was not equal to oats even then. Coarsely ground rye flour gave better results than the whole grain or a fine ground flour. If the rye contains much ergot or smut it would be liable to cause abortion in cows, and possibly with other animals, though sheep and swine are not as subject to that trouble as cows.

FEEDING PIGS.

An experiment made by the editor of Hoard's Dairyman showed that pigs weighing one hundred pounds each, fed for eight weeks on skimmilk alone, and sold at the same price paid for them, had gained enough to make the value of skimmilk 22½ cents a hundred pounds. Another lot fed on skimmilk and cornmeal for the same length of time made gains that would warrant paying thirty-two cents a hundred pounds for the skimmilk. By other experiments he found that one hundred pounds of skimmilk alone produced five pounds of pork, one hundred pounds of cornmeal alone made ten pounds of pork, and one hundred pounds of skimmilk and cornmeal mixed and fed together made eighteen pounds of pork. Combining them increased their value twenty per cent.

WINTER SPRAYING OF FRUIT TREES.

The spraying of fruit trees during the winter should not be neglected. Before the leaves start the trunk and every branch of the tree should be well sprayed with a solution of one pound of copper sulphate in twenty-five gallons of water to check scab, codling moth, bird moth, tent caterpillar, canker worm, plum curculio and San Jose scale on apple trees, to be followed up after the blossoms fall by the regular bordeaux mixture of four pounds each of sulphate of copper and lime to fifty gallons of water. Some prefer to use six pounds sulphate of copper instead of four pounds, but we are not sure that this is any better than the other, while for peach trees that have put out their leaves the use of three pounds of sulphate of copper to six or nine pounds of lime is thought strong enough for fifty gallons of water. But we are now speaking of a winter spray before the leaves come out. The mixture of fifty pounds each of lime, salt and flowers of sulphur is used on the Pacific coast for the San Jose scale, but in our Eastern climate it does not seem to be as effectual, as the frequent rains wash it off. A mixture of pure lime made as a thin whitewash and used on peach trees two or three times in the winter has been recommended as a spray that will keep the leaves and buds from starting early enough to be killed by the spring frosts.

GROWING QUINCES.

As the roots of the quince tree grow nearer the surface than many other trees, they will live and grow where the land is too wet for pear and apple trees that will not thrive unless they are about five feet above the water level. Apples do better upon soil even higher than that, as at that point some varieties die or refuse to bear because the ground is too wet and cold for the roots. But even the quince, with its roots spread near the surface, will do better upon higher land if it is made rich enough, the only reason for its thriving at the side of the brook being that the soil is usually rich and deep there. We think the quince a profitable fruit to grow when it sells, as it usually does, at from $1 to $2 a bushel. The quince is usually not a long-lived tree, but it suffers from a lack of fertility in the soil, a lack of cultivation to keep the weeds and grass from around it, and often more from borers than all other causes. But its pruning is often neglected, particularly when it is grown in the bush form, which, perhaps, is the most natural to it, although we should prefer it grown and trained as a tree, as the fruit is larger and finer. It does as well on dry, gravelly soil as in moist land, and in the tree form it can be better cultivated and the borers kept out much easier. A mulching of coarse hay or straw around the trunk in winter is an advantage not only in preventing winter-killing, but in promoting the setting of fruit. Strawy manure about six inches thick put on in the fall, with an application of hardwood ashes, or of ground bone and potash salts before the mulch is put on, will stimulate the growth of new wood in the spring, and it is upon this new wood that the fruit sets. After the fruit is gathered is the season for pruning. As the trees can grow at eight to ten feet apart, from four hundred to five hundred can be grown on an acre, and a yield of one bushel to a tree gives a handsome income, and we have known a tree to produce more than that. The apple quince is the favorite in our markets, as being earlier and cooking more tender than the pear-shaped quince. It does not keep as well as the latter and is not usually as high flavored, but one does not buy them to keep during the winter, and the flavor of either variety is good enough when they are well ripened.

OVERSUPPLY OF BEN DAVIS APPLES.

An apple dealer in St. Louis tells the New York Packer that on Saturday four boats unloaded ten thousand barrels of apples in that city. A canvas of the receivers showed that 9500 of them were Ben Davis. The railroad receipts show about the same proportion. The result is that the Ben Davis is selling at but little more than half what better sorts are bringing. Really choice Ben Davis could be bought on the levee for $1.50 a barrel, while a fancy lot of Huntman's Favorite sold at $3.50, and another lot from the same shipper at $3.25, although the average price for that variety was $2.50 to $2.75. Grimes' Golden and Jonathan $2 to $2.75, Rome Beauty and Willow Twig $2 to $2.50, Winesap, Northern Spy, Missouri Pippin and Gano $2. But the low price is not the worst feature. Most of the orders coming in now distinctly specify "Send no more Ben Davis." Three-fourths of the receipts are now going into cold storage, and when the cost of storage, fifty cents a barrel for the season, and cartage two ways, is added to the cost of the Ben Davis, making the price of $2.10 a barrel next spring, which speculators say they will not bring, buyers will prefer to pay more for better apples. The writer wishes all the agricultural journals to warn their readers, fruit growers and nurserymen that the Ben Davis is doomed and condemned even for commercial purposes. "The only hope for it in the future is in a short crop and a great scarcity of apples, when nothing better can be had" is the way he concludes.

A NEW ROT IN APPLES.

The Geneva (N. Y.) Experiment Station says they have discovered a new fungous disease that is attacking the apple crop in western New York. It only touches those apples which are attacked by the scab, but from that scab a white or pinkish mildew spreads, which soon changes them into brown, sunken, bitter, rotten spots, and if the fruit is much affected by the scab, it soon becomes a mass of rot. This does not seem like our old acquaintance, the bitter rot on apples, which may or may not be the same as the brown rot on peaches and plums. Perhaps experts with a microscope can distinguish between them, but we cannot, and if they are not the same thing, we shall continue to think they are as nearly related as first cousins, and if the one appears on peach, plum or cherry tree, the bitter rot is likely to appear on the apples growing near them. But this disease is sometimes found upon the apples on the trees and quite as frequently upon those that have been picked and barreled, or those that are left to sweat in the heaps. It does not seem to attack any apples excepting those which have the scab, and thus it may be prevented by the spraying with the bordeaux mixture which is given for the scab, but we do not know that it may not assume a more virulent form and develop in apples that are not scabby. A spraying with bordeaux mixture may not check it, but the spraying can do no harm and may stop its increase.

Watercress Farming.

A GREAT INDUSTRY IN THE OUTSKIRTS OF LONDON.

Watercress farming is an industry of which few people outside those whom it directly concerns know anything.

Yet it is one of the oldest forms of suburban enterprise; at the same time it is one of the most up-to-date and scientifically conducted businesses in the country, and one of the most remunerative and prosperous departments of agriculture.

It is safe to say that of the tons of watercress, which the Londoner devours each year, scarcely a single spray is of wild growth. The succulent little weed must reach its consumer in the first flush of freshness, and as it does not flourish in the native state near enough to the capital to render this possible, the great watercress farming industry has sprung up all round the outskirts of London.

But the watercress farmer is a cultivator, not a grower; he merely beds out and improves the wild herb; he does not raise it from seed. To supply him with the wild watercress, a whole subsidiary industry has come into being in Wiltshire and Hampshire, where for mile after mile the little water weed grows in its natural state.

A watercress farm presents a spectacle wholly different from any other form of land culture. On a hot summer's day there are few sights so refreshing. Acre after acre of smooth, dark-green beds, close as the thickest velvet pile, level as a billiard table, stretch out on every side far as the eye can see. Here and there the neat, trim houses of the farmers stand out, white and glaring, against the lush growth. Dotted about at intervals are the gatherers, for the most part men, but some of them women in large, old-world sunbonnets, kneeling with bared arms on the narrow deal footways, and garnering the generous harvest. A strange silence, intensified rather than broken by the unceasing ripple of running water, broods over the whole scene.

For running water, and an unfailing supply of it, is the prime essential of watercress cultivation. Standing water, in no matter what volume, is useless. It is a comforting thought that the vast quantities of watercress London eats are raised under conditions of idyllic cleanliness. For not only must the water be ever moving; it must also be of perfect purity.

A site, then, has to be selected close beside some untainted stream or else where springs bubble in pristine freshness to the surface. As many beds—or "ditches," as they are called—are then laid out as the space will permit. The usual plan is first to cut a feed channel, leading the water in a straight line the whole length of one boundary of the site. At right angles to this and side by side the watercress ditches are cut, narrow grass walks of from fifteen to eighteen inches wide being left between them. The beds vary in length from 150 feet to half a mile or more, but in width are always about eighteen to twenty feet.

The watercress is set at two seasons of the year—during the present month for the winter harvest and during March for the summer crop.

Two wholly different methods of gathering the watercress are recognized—viz., "picking" and "cutting." A fertile ditch can be "picked" about every fortnight through the season—say from the end of September, whereas when the watercress is "cut" it takes not less than six weeks to grow again, so that approximately one cutting is reckoned to equal three pickings, but the loss of time thus entailed by the former method is more than compensated for by the size of the crop obtained and by its more valuable character. For "cut cress" is far more tender, and consequently fetches a much higher price than "picked cress."

The watercress, when gathered, is sent to London in "flats," large square lidded baskets, each capable of holding about ninety pounds weight of the "weed," and nothing gives so vivid an impression of the importance of watercress farming as the sight of thousands of these flats pouring into Covent Garden each morning from all directions.

A good ditch in a favorable year is a profitable possession. One measuring, say, 150 feet by eighteen feet will yield at least eighty flats in a season, fetching on an average 5s. apiece, or £20 in all. In the spring, when the young watercress is at its best, the price will range as high as 15s. or 16s. a flat, but 5s. may be taken as a good minimum average for the season all through—an average, that is, below which the price will not sink. In the same way a ditch, in a good year, will yield as many as twenty-seven flats at each gathering, of which there will be five in the season, or 135 flats in all; but eighty may be taken as a safe minimum yield.

The watercress for stocking such a bed will cost £6 or £7, and after making an ample allowance for labor, repairs and other outgoings there should be a profit of from £8 to £10; in other words, a dozen beds of this size, occupying exactly three-quarters of an acre with their grass walks, should insure an income of at least £100 a year, and may bring in nearly double in very favorable circumstances.—London Mail.

Historians of the Revolution have generally been inclined to attach small importance to the "affair at North Bridge, Salem," wherein the British Colonel Leslie marched to that city with the intention of capturing or destroying certain munitions of war, thought better of it after he had seen the preparations made for his reception, and saved his dignity by a compromise that permitted him to march thirty paces beyond the bridge before he about-faced his gallant company and marched away again. Not a shot was fired on either side. But the historical material, which has been recently brought together by the Salem Essex Institute, shows that the affair went off very nicely without it; also it shows what arbitration may do even on the tented field.

When Setting the Orchard.

In planting orchards there are some things that we may consider common dangers that beset the orchardist, says the New York Farmer. Among them is the crowding of trees. When an orchard is planted we are liable to think the trees so far apart that they will scarcely ever need all the space allowed them.

They seem so little and so far apart. As they grow older they begin to interlock before we realize it. Pruning off the dead and feeble branches does little good. What is wanted is more room.

In procuring trees to set make great efforts to obtain thrifty well-grown stock. By thrifty I do not mean necessarily large trees; in fact, the size is of minor importance.

A tree two years old, large of its age, is preferable to a three-year-old, small of its age, for the reason that in the latter case it has been starved and stunted in growth. I have observed that trees that have made good, strong growth in the nursery rows, when transplanted do better, and, with equal care with those of an inferior grade, have the advantage in the struggle for existence and development.

Moisture is essential and the most important part of the conditions of transplanting. To lessen the requirements of the tree we always shorten the tops very much, only leaving one-half and often one-third of each branch. Our next consideration is to put the roots in the best possible condition to absorb moisture.

This we do by cutting off the bruised ends of all roots of any size, always with a starting cut from the under side, as the fresh-cut ends will much more readily absorb moisture than the broken ends can, as they are left after the process of digging from the nursery row. It is at the end of the smoothly cut roots nearly all the new growth takes place and where rootlets form to nourish the tree.

In the great International Tuberculosis Congress at Berlin a paper was recently read by Professor Koch, in which he maintains his former position regarding the non-transmissibility of animal tuberculosis to man. Professor Koch cannot see any connection between a skin lesion and tuberculosis ending in death. He further says that if infection is so frequent through milk, positive proof ought to be obtainable. How is it that no general infection follows the eating of tuberculous meat, or the drinking of milk from a tuberculous cow? If tubercular meat is apparently so harmless as some experts claim, why is it not the same with milk? People think that boiled milk is harmless, but boiling does not exterminate tubercular bacilli, and sterilizing milk impairs its quality. Why is it that the public is so nervous about milk, but yet will eat butter, in which bacilli are equally nurtured, without hesitation? According to many of the experts who are frightening people, most people have eaten tubercular bacilli. Why, then, is not the infection widespread? Professor Koch does not affirm that the transmission of tuberculosis from animal to man is impossible, but that the cases of the kind were extremely rare, even if they did occur. Last year Professor Koch received a number of letters from people who had drunk tubercular milk for years, and yet who had discovered only upon the death of the cow that the animal was tuberculous. However, Professor Koch recommends, in order to combat the disease, that we find the root of the evil, establish better dwellings and workshops, avoid overcrowding, and isolate persons affected with tubercular bacilli.

The simple statistical statement that in 1901 there were only 733,802 working days lost by reason of strikes, as compared with something like twenty million already lost in 1902, gives incidentally a very good notion of how much work there is done in a year by those who don't strike.

Commonwealth of Massachusetts.

MIDDLESEX, SS.

PROBATE COURT.

To the heirs-at-law, next of kin, and all other persons interested in the estate of JOSIAH M. FISKE, late of Newport, in the State of Rhode Island, deceased.

WHEREAS, a petition has been presented to said Court, by Frederic D. Fisk of Cambridge, in said County of Middlesex, with certain papers purporting to be copies of the last will and testament of said deceased, and of the probate thereof in said State of Rhode Island, duly authenticated, representing that at the time of his death, said deceased had estate in said County of Middlesex, on which said will may operate, and praying that the copy of said will may be filed and recorded in the Registry of Probate of said County of Middlesex.

You are hereby cited to appear at a Probate Court, to be held at Cambridge, in said County of Middlesex, on the ninth day of December, A. D. 1902, at nine o'clock in the forenoon, to show cause, if any you have, why the same should not be granted.

And said petitioner is hereby directed to give public notice thereof, by publishing this citation once in each week, for three successive weeks, in the MASSACHUSETTS PLOUGHMAN, a newspaper published in Boston, the first publication to be thirty days, at least, before said Court.

Witness, CHARLES J. MCINTIRE, Esquire, First Judge of said Court, this fifth day of November, in the year one thousand nine hundred and two. S. H. FOLSOM, Register.

Commonwealth of Massachusetts.

MIDDLESEX, SS.

PROBATE COURT.

To the heirs-at-law, next of kin, and all other persons interested in the estate of THANKFUL R. HASELTINE, late of Melrose, in said County, deceased.

WHEREAS, a certain instrument purporting to be the last will and testament of said deceased, has been presented to said Court, for Probate, by William H. H. Tuttle, who prays that letters of administration with the will annexed may be issued to him, without requiring sureties on his bond, or to some other suitable person, the executor named in said will having deceased.

You are hereby cited to appear at a Probate Court, to be held at Cambridge, in said County of Middlesex, on the twenty-fifth day of November, A. D. 1902, at nine o'clock in the forenoon, to show cause, if any you have, why the same should not be granted.

And said petitioner is hereby directed to give public notice thereof, by publishing this citation once in each week, for three successive weeks, in the MASSACHUSETTS PLOUGHMAN, a newspaper published in Boston, the last publication to be one day, at least, before said Court, and by mailing, postpaid, or delivering a copy of this citation to all known persons interested in the estate seven days at least before said Court.

Witness, CHARLES J. MCINTIRE, Esquire, First Judge of said Court, this thirty-first day of October, in the year one thousand nine hundred and two.

S. H. FOLSOM, Register.

Commonwealth of Massachusetts.

MIDDLESEX, SS.

PROBATE COURT.

To all persons interested in the estate of SOPHRONIA GREENWOOD, late of Dublin, in the County of Cheshire and State of New Hampshire, deceased, or in the personal property hereinafter described, and to the Treasurer and Receiver-General of said Commonwealth.

WHEREAS, Charles J. Ellis, appointed executor of the will of said deceased, by the Probate Court for the County of Cheshire, in the State of New Hampshire, has presented to said Court his petition representing that as such executor he is entitled to certain personal property situated in said Commonwealth, to wit: A deposit of $600 and interest in the Middlesex Institution for Savings, at Concord, Mass., Book No. 19983, and praying that he may be licensed to receive or to sell by public or private sale on such terms and to such person or persons as he shall think fit—or otherwise to dispose of and to transfer and convey such estate.

You are hereby cited to appear at a Probate Court, to be held at Cambridge, in said County of Middlesex, on the twenty-fifth day of November, A. D. 1902, at nine o'clock in the forenoon, to show cause, if any you have, why the same should not be granted.

And said petitioner is ordered to serve this citation, by publishing the same once in each week, for three successive weeks, in the MASSACHUSETTS PLOUGHMAN, a newspaper published in Boston, the last publication to be one day, at least, before said Court, and by serving a copy of said citation on the Treasurer and Receiver-General of said Commonwealth fourteen days, at least, before said Court.

Witness, CHARLES J. MCINTIRE, Esquire, First Judge of said Court, this fourth day of November, in the year one thousand nine hundred and two. S.H. FOLSOM, Register.

Commonwealth of Massachusetts.

MIDDLESEX, SS.

PROBATE COURT.

To the heirs-at-law, next of kin, creditors, and all other persons interested in the estate of CHARLES R. HAAG, late of Reading, in said County, deceased, intestate.

WHEREAS, a petition has been presented to said Court to grant a letter of administration on the estate of said deceased, to Charles J. Haag of Reading, in the County of Middlesex, without giving a surety on his bond.

You are hereby cited to appear at a Probate Court, to be held at Cambridge, in said County of Middlesex, on the twenty-fifth day of November, A. D. 1902, at nine o'clock in the forenoon, to show cause, if any you have, why the same should not be granted.

And the petitioner is hereby directed to give public notice thereof, by publishing this citation once in each week, for three successive weeks, in the MASSACHUSETTS PLOUGHMAN, a newspaper published in Boston, the last publication to be one day, at least, before said Court.

Witness, CHARLES J. MCINTIRE, Esquire, First Judge of said Court, this thirty-first day of October, in the year one thousand nine hundred and two.

S. H. FOLSOM, Register.

Commonwealth of Massachusetts.

MIDDLESEX, SS.

PROBATE COURT.

To the heirs-at-law, next of kin, creditors, and all other persons interested in the estate of CLARENCE L. HAAG, late of Reading, in said County, deceased, intestate.

WHEREAS, a petition has been presented to said Court to grant a letter of administration on the estate of said deceased, to Charles J. Haag of Reading, in the County of Middlesex, without giving a surety on his bond.

You are hereby cited to appear at a Probate Court, to be held at Cambridge, in said County of Middlesex, on the twenty-fifth day of November, A. D., 1902, at nine o'clock in the forenoon, to show cause, if any you have, why the same should not be granted.

And the petitioner is hereby directed to give public notice thereof, by publishing this citation once in each week, for three successive weeks, in the MASSACHUSETTS PLOUGHMAN, a newspaper published in Boston, the last publication to be one day, at least, before said Court.

Witness, CHARLES J. MCINTIRE, Esquire, First Judge of said Court, this thirty-first day of October, in the year one thousand nine hundred and two.

S. H. FOLSOM, Register.

Commonwealth of Massachusetts.

MIDDLESEX, SS.

PROBATE COURT.

To all persons interested in the estate of SAMUEL N. BUNLING, late of Somerville, in said County, deceased.

WHEREAS, L. Roger Wentworth, the trustee under the will of said deceased, has presented for allowance the fourth and final account of his trust under said will:

You are hereby cited to appear at a Probate Court, to be held at Lowell, in said County, on the eighteenth day of November, A. D. 1902, at nine o'clock in the forenoon, to show cause, if any you have, why the same should not be allowed.

And said trustee is ordered to serve this citation by delivering a copy thereof to all persons interested in the estate fourteen days at least before said Court, or by publishing the same once in each week, for three successive weeks, in the MASSACHUSETTS PLOUGHMAN, a newspaper published in Boston, the last publication to be one day, at least, before said Court, and by mailing, post-paid, a copy of this citation to all known persons interested in the estate seven days at least before said Court.

Witness, CHARLES J. MCINTIRE, Esquire, First Judge of said Court, this twenty-ninth day of October, in the year one thousand nine hundred and two. S. H. FOLSOM, Register.

Commonwealth of Massachusetts.

MIDDLESEX, SS.

At a Probate Court holden at Cambridge, in and for said County of Middlesex, on the thirteenth day of October, in the year of our Lord one thousand nine hundred and two.

ON the petition of NELLIE PIERCE WARREN of Newton, in said County, praying that her name may be changed to that of HELEN PIERCE WARREN, public notice having been given, according to the order of Court, that all persons might appear and show cause, if any they had, why the same should not be granted, and it appearing that the reason given therefor is sufficient, and consistent with the public interest, and being satisfactory to the Court, and no objection being made,

It is decreed that her name be changed, as prayed for, to that of Helen Pierce Warren, which name she shall hereafter bear, and which shall be her legal name, and that she give public notice of said change by publishing this decree once in each week, for three successive weeks, in the MASSACHUSETTS PLOUGHMAN, a newspaper published in Boston, and make return to this court under oath that such notice has been given.

GEORGE F. LAWTON,
Judge of Probate Court.

Commonwealth of Massachusetts.

MIDDLESEX, SS.

PROBATE COURT.

WHEREAS, NELLIE ADAMS WHITMAN of Newton, in said County, has presented to said Court, a petition praying that her name may be changed to that of FRANCES NELLIE ADAMS WHITMAN for the reasons therein set forth:

All persons are hereby cited to appear at a Probate Court, to be held at Cambridge, in said County of Middlesex, on the eleventh day of November, A. D., 1902, at nine o'clock in the forenoon, to show cause, if any they have, why the same should not be granted.

And said petitioner is hereby directed to give public notice thereof by publishing this citation once in each week, for three successive weeks, in the MASSACHUSETTS PLOUGHMAN, a newspaper published in Boston, the last publication to be one day, at least, before said Court.

Witness, CHARLES J. MCINTIRE, Esquire, First Judge of said Court, this fourteenth day of October, in the year one thousand nine hundred and two.

S. H. FOLSOM, Register.

Our Domes.

The Workbox.

LADIES' BLOUSE SWEATER.

Use six laps of Lion brand Spanish yarn, 1½ yards three-quarter inch satin ribbon, color of yarn, hooks and eyes on tape for front, two dozen small buttons, one pair of bone needles, No. 5, 1 pair of steel needles, No. 10.

With bone needles, cast on 116 stitches (*) (2 plain, purl 2), 7 times, 6 plain, purl 2 (3 plain, purl 2), twice, 6 plain, purl 2 (3 plain, purl 2), twice, 6 plain, purl 2 (3 plain, purl 2), twice, 6 plain, purl 2, 2 plain to the end.

2d row—Reverse order of previous row, that is, purl 2, plain 2, etc. This is done because it has a right and wrong side.

Knit as above for 11 rows. On twelfth row remove first 3 of the 6 stitches to an extra needle, then knit second 3, put first 3 back on left-hand needle and knit them, then purl 2, 3 plain, purl 2, 3 plain, purl 2, remove first 3 of 6 stitches as before. This makes plait. Continue to end of row, then return to (*).

Knit this way, making a plait on every twelfth row, until jacket measures 14 inches. Now (knit 2 plain, purl 2) 18 times, (36 stitches) 3 plain, purl 2, making 41 stitches for shoulder. Take off carefully on to a third needle these 41 stitches, leaving 41 stitches at the other end. These are for the shoulders. Bind off the intervening 34 stitches, knit the 41 stitches left on the needle which you are working forward and back 5 times (or 10 rows in all), as follows: Purl 2, 3 plain, purl 2, 2 plain, purl 2, and so on to the end.

Then cast on toward the front 69 stitches (purl 2, 3 plain) twice, purl 2, 6 plain, (purl 2, 3 plain) twice, purl 2, 6 plain (purl 2, 3 plain) 4 times, purl 2, 2 plain to the end. Knit as above for 11 rows, on 12th row (* *) remove first 3 of 6 stitches to an extra needle, then knit second 3, put first 3 back on left needle and knit them (purl 2, 3 plain) twice, purl 2 and return to (* *); continue to end of row. There will be 3 plaits on each side of front. Knit the same for six inches.

Cast on 15 stitches towards back for under-arm piece; knit 9 inches in this way. Then knit 30 stitches of under-arm seam, turn and knit towards front without removing the needle,—next knit to within 37 stitches of under-arm and turn; knit back and forth 4 times more, each time leaving 2 stitches on other needle. This will make 45 stitches on under-arm needle. Knit back to under-arm seam, then commence at under-arm and knit and purl 9, and purl 2 together 13 times, knit and purl 3 together 14 times, knit and purl 4 together 12 times; 2, 3 and 4 together means to take these number of stitches upon the needle and knit them off together. Bind off all these stitches; this gathers fullness in front.

Make other side of front to correspond with this, beginning with the 10 rows on shoulder and casting on 69 stitches for front as before. Pick up all the stitches on front and back on one of the steel needles, first sewing up under-arm seam, then 2 plain, purl 2 for a depth of 1½ inches; this forms belt.

Sleeve—Cast on steel needles 78 stitches, knit 2 plain, purl 2 for 5 inches. Change to bone needles (2 plain, purl 2) twice, (3 plain, purl 2) twice, 6 plain, purl 2, (3 plain, purl 2) twice, 6 plain, (purl 2, 3 plain) twice, purl 2, 6 plain, (purl 2, 3 plain), twice, (purl 2, 2 plain) twice; knit as above for 11 rows; on twelfth row make plait as in jacket. Continue this until it measures 3½ inches.

Increase 1 stitch each end of needles for 8 rows, knit 8 rows without increasing. Repeat 3 times, then knit 2 inches without widening, then widen 12 stitches, then knit 2 inches and widen 12 stitches, then knit without widening until sleeve is desired length; bind off loosely.

Collar—Cast on steel needles 150 stitches, 2 plain, purl 2 until collar is 5½ inches deep. Bind off loosely. Gather fullness of sweater in front at neck and sew on collar.

EVA M. NILES.

Practical Topics.

Window seats and boxes for the nursery or any room where the children stay and play are useful in many ways. If there is even a slight jog to the window they are easily fitted in; and boarded up, the top fitted on a hinge so that it may be raised, an excellent receptacle for play-room litter is provided. If liked, the space beneath one seat may have two shelves for the children's books and magazines, in which case little curtains stretched on a wire or slender rod should fall from both seats. These should match the removable cushions of the seats, and should be of denim, chintz or other stout and washable material. Have the windows thoroughly protected with window strips, for the children will sit in these seats for hours at a time, interested in outdoor sights. Nothing more quickly induces serious colds than lounging in a draughty window. On the other hand, if the window is properly stripped, the seat boxes will prove added protection from draughts that are sure to come in around windows in our poorly built houses.

When glass dishes are used for flowers, it is useful to have the open wire coverings that come for the purpose, through which the stems may be thrust. In this way a few flowers may be used to excellent advantage. These coverings fit long narrow, as well as circular dishes. The mirror mats are most desirable, too, and two or three or more in different sizes and shapes permit much variety in table decorations. It is a good plan, too, to have a set of four individual silver candlesticks, with a round of shades. The open-work silver shades with which a glazed color piece is used are the most economical in the end. The color pieces are very cheap, and once a set in pink, white, red, green and yellow is acquired, a wide range in the table scheme is possible. As fresh candles must always be bought, it is easy to get them of the desired color. The detached candlesticks are also better value than the branching ones, when economy is to be considered and frequent entertaining is undertaken, as the arrangement of the former can be widely varied.

A recent addition to the list of savory salts is onion salt, which is now put up in shaker cans or bottles for flavoring use.

Rice balls make a pretty company garnish for soup to be used instead of plain rice. Mash or stir down with a fork a cupful of cold boiled rice, and, mix with a batter made of one whole egg beaten, a tablespoonful of flour, with a seasoning of salt and a pinch of cayenne pepper. Stir, smooth and make into balls not larger than a small marble. These are dropped into the soup just before it is sent to the table.

A scientific dermatologist says that the scalp of the head should not be reached with the brush if dandruff is present. This trouble, he further asserts in a printed interview, is really a light form of eczema, which, if not checked, will extend over nose and cheeks, and, in the form of enlarged and blackened oil glands, make the skin most unsightly. The trouble is so contagious that few escape it, and vigorous brushing of a diseased scalp, so often recommended by ignorant hair-dressers, will reinoculate the skin and prevent cure, even under treatment. The hair may be smoothed with a brush, and that is all. Persons having dandruff should take great care of their brushes and combs, washing them in ammonia water and sun drying every few days. After a cure antiseptic lotions should be often applied to prevent another attack, and ignorant treatment at any time should be avoided.

Roll-trays are shown as new china furnishings for the table. They are long and exactly the width of a Vienna roll. Another addition to the breakfast service is the revival with a new name—breakfast frame—of the small caster of former days. This holds now, as it did then, oil, vinegar, salt and pepper, and is offered in expensive silver and cut glass.

Try for the Thanksgiving feast ham baked in cider. This can be done the day before, and warmed through when needed. Choose a good lean ham of about eight pounds. Wash thoroughly, and over the fleshy side sprinkle chopped onions, a little cloves and allspice, a teaspoonful of cinnamon and a half-teaspoonful of ground ginger. Make flour and water into a paste as thick as dough, and cover over the ham. Put skin side down in the roasting-pan with two quarters. Cook slowly for three hours, basting every ten minutes. When done, take off the paste and rind, and set away. An hour before serving return to the baking-pan, flesh side down, brush the fat portion with beaten egg, and sprinkle thoroughly with chopped parsley and breadcrumbs mixed, and let the ham heat through in the oven. Boil the cider in which the ham was first roasted down to a creamy sauce; remove every bit of fat from the surface, reheat, and send round in a sauce boat with the ham.

Six drops of olive oil used every third night to massage the lower face and throat will long keep off the first throat and chin wrinkles that all women dread. Use the tips of the fingers, and stroke the oil in gently, yet firmly. Leave it on over night, washing it off in the morning with hot water and without soap. If it is found that every third night keeps the skin a bit too oily, the interval may be a little lengthened.

The small miss from five to ten years old has her hair now fashionably cut in a way that is said to be good for the locks, but possible in appearance only to such a fresh young face as she owns. It is cut straight around in a length which brings it behind just to the nape of her neck. The front locks are gathered from falling in her eyes, and tied with liberty satin ribbon about two inches wide in a soft bow with short ends, quite on the top of her head.

Housewives should not forget that even with the most attractive open plumbing, the collection of filth in waste-pipes is still to be reckoned with. Until glass or something equally smooth can be used, the absorbent corrosive piping will accumulate matter that endangers health. Pipes should be frequently flushed out with strong hot sal-soda water, and afterwards with clear water.

An ingenious conversion of a handsome mahogany four-post bedstead into a sort of divan settle was recently seen. The side pieces were shortened about half, and the head and foot posts cut sharply down to bring the bed level about twenty inches from the floor. After that the cords were restored, a mattress put on, and cover and valance of green corduroy provided.

A beautiful decoration at a Hallowe'en party can be made with a large pumpkin filled with salvia, and resting on a leaf of the castor-oil bean.

The chaperone who, in packing the picnic basket for some autumn house-party, sunset tea or other al fresco meal, substitutes rolls for the usual bread slices, will find herself very popular. For chicken salad, for example, to get even baker's rolls of the variety known as milk rolls, take a bit of the inside crumb out with a fork, and use the shells to hold the salad, pressing the two halves together—will prove to have been an inspiration.

A teacupful of blanched and finely chopped almonds added to the rice pudding made without eggs and by slow cooking is a decided improvement.

It is possible to get in New York, and presumably in other large cities, coffee to serve in the Turkish way. This is a fine quality of the berry, strong and finely powdered. It is as thick as syrup when drank, and is served very hot, and sent round without sugar or cream.

An Englishwoman says that at home pastry is considered unwholesome, but boiled suet puddings are permitted, even for children. They are considered nourishing and are often served. For the children's table the hard sauce is omitted, jam or maple syrup being used instead. The recipe for a plain plum pudding got from an English housekeeper calls for one cupful each of ground rice, suet, flour, sugar, stoned raisins and milk, with one tablespoonful of vinegar and one teaspoonful of soda. Stir well together and boil for three hours.

One of the dyed chamois-skins is an excellent lamp-mat for a polished table,—the rich red, green, or a certain shade of peacock blue. A red one goes specially well with a lamp of Egyptian design.

A grape catsup very good to serve with cold meats is still possible to make these late autumn days. Wash five pounds of grapes that have been stemmed before weighing, put them in a porcelain-lined kettle, and heat slowly till soft. Rub through a sieve and return to the fire with three pounds of sugar, one pint of vinegar, one teaspoonful each of ground cinnamon, allspice and black pepper. Boil for an hour and bottle while hot.

Peeled, chopped tomato sprinkled over lettuce, the whole covered with French dressing, makes a Russian salad.

As you value your own and your family's digestion, don't serve tea with fish. The tannic acid hardens the fibre and makes it indigestible. It should not be offered with any form of fish, shell-fish, or the articulate animals like lobsters and crabs. Iced tea and soft-shelled crabs, for example, are a combination that should be avoided.

The delicious flavor which all travelers in France discover in the coffee of that country is got, it is said, by the addition of a little butter and sugar during the roasting process. To every three pounds of roasting berries a tablespoonful each of butter and powdered sugar is added. These in melting spread over the beans in a thin coating, which holds the aroma, and contributes a caramel flavor that is delicious and distinctive.—Harper's Bazar.

Treatment of Rugs.

The manager of a Chicago carpet department, whose knowledge brings him an annual income of $10,000, advised the following treatment for valuable rugs: Lay them wrong side up on the grass, beat with a furniture beater, reverse and sweep carefully, a soft brush being the preference, or a good carpet-sweeper. A little airing outside of the sun's rays is good occasionally, when they may be carried in the house. The average American housewife wears out her rugs by continued sweeping and beating. The plan of putting them upon a line every two or three weeks, or even once a month, and then having them whipped, is not to be commended if the rugs are of any value. When a rug is to be thoroughly cleaned, it should be sent where the work is properly done, or else washed at home.

A machine is now in use which loosens the dust and removes it by means of a strong current of air. This is effective and not hard on the rug. When the surface becomes soiled it can be washed with no fear of injuring the colors, since the majority of Oriental rugs are washed repeatedly before reaching this country, and the dyes used are thereby mellowed and enriched. The best method of washing a large rug is to stretch and tack it upon a clean floor, then scour it well with soapsuds. After the scouring it must be thoroughly rinsed, to remove all trace of the animal matter in the soap, after which it should not be removed until it is perfectly dried. Then it will not shrink and will lie perfectly flat upon the floor. A small rug may be tacked upon the side of the house or barn, scoured as if on a floor and then rinsed with a hose. —Good Housekeeping.

Fast Eating on the Increase.

Eating rapidly, according to the testimony of a specialist in the kind of trouble caused by that breach of good table manners, is very much commoner than it used to be. And it is on the increase.

"I was remonstrating with a friend the other day about the manner in which he was gobbling his food," said this specialist in digestion. "He told me that he had deliberately learned to eat rapidly because it was necessary in self defence. He said that he had clung to his own habit of eating slowly as long as possible, but he had eventually to give it up because he was always the last person to finish at dinner. When he was half way through the meal everybody else was waiting on him. So he tried to learn how to eat as rapidly as the other persons he knew.

"The number of evils that are to be avoided by slow eating is so great that I don't believe any sane person who knew of them would eat quickly. Half the troubles that people complain of to me are due to the habit.

"One of the things which ought to persuade most persons to eat slowly is the fact that this practice will reduce flesh, or at all events it will prevent a person from becoming abnormally stout if there are no other flesh-pampering habits, such as drinking at meals or eating sweets in large quantities.

"The person who eats slowly never eats too much. If the food be carefully chewed half the amount one usually eats in a hurry will suffice. If the food is eaten slowly, it satisfies, whereas large lumps of rapidly consumed food do not gratify the appetite, but stimulate a craving for more food.

"Another merit that comes from slow eating is the effect on the complexion. For one who eats rapidly a clear skin is out of the question. A muddy, mottled color is the result of eating in the rapid way that most persons do nowadays. If a person is found who does eat rapidly and has at the same time a clear skin, it will be found that this person usually eats so little that there is no possibility of indigestion.

"There are two other advantages of slow eating which ought to appeal to everybody's vanity. I have not mentioned more serious discomforts, such as confirmed indigestion, which is nearly always cured by this habit and no other. But to keep from getting too fat and to insure a clear complexion seems to me a sufficient reward for slow eating to make it worth while.

"Fast eating comes in a large measure from nervousness. The average man who eats in a hurry does it not because he is pressed for time, but because he has something else on his mind which seems to him more important. The American attitude of mind has come to be that it is desirable to end the trouble of eating as soon as possible and get back to pleasure or business.

"But it is a mistake to suppose that Americans are the only fast eaters. They compare very favorably with the Germans. All that one hears of German slowness and deliberation seems to disappear at the table. The Germans eat more rapidly than Americans, and, generally speaking, they eat more, which is a good reason why they should try to chew their food. The English, as a rule, eat more slowly than Americans. But as yet we are the only nation that advertises a "quick lunch." Others may say that lunch is good or cheap. But only here does one boast that it is quick.—New York Sun.

Domestic Hints.

TRIPE A LA POULETTE WITH MUSHROOMS.

Select previously well-cleansed, raw, fat and very fresh tripe, blanch it for ten minutes, and when drained cool it off, cut it into large pieces and put them into a stock pot with water, salt, allspice, carrots, onion with two cloves and a bunch of parsley garnished with thyme and bay leaf; let boil very gently on a slow fire for eight hours, keeping the cover on close, then put the tripe aside to cool in its own water. Drain and wipe it off, and cut it into two-inch by one-half inch pieces, then fry them in butter without attaining a color; drain off the butter, cover the tripe with an allemande sauce, and just when ready to serve incorporate into it a piece of fine butter, some chopped parsley and minced mushrooms and a little lemon juice.

BOILED STUFFED CHICKEN.

Boil till about half cooked enough onions to fill the chickens to be cooked, and drain; mash them a little, moisten with milk, season with salt and white pepper and a chopped celery stalk or two to them. Fill the chickens, truss them, and boil till tender. Let the water in which they boil cook away slowly till only a half pint or so remains. Add to this half a pint of rich cream, season as needed with pepper and salt, thicken and serve.—The Epicure.

FRIED COD STEAKS.

Trim the steaks well and flatten; cover each with a coating of oil, in which are lemon juice, a little onion juice, cayenne pepper and salt. At least an hour the fish should stay in this dressing, then lightly drained, dipped in egg, then in crumbs and fried. Or if it is preferred to have it broiled, drain it from the oil and put right on the gridiron over a hot fire.

CHOCOLATE LAYER CAKE.

Half a cup of butter, two cups of sugar, three whole eggs, or the whites of six, one cup of milk, three cups of flour, two even teaspoonfuls of cream of tartar and one teaspoontul of soda. Beat butter and sugar to a cream, add the eggs beaten together, sift the cream of tartar and soda in the flour, add the flour alternately with the milk. Bake in four or five layers. Chocolate filling: Take two unbeaten whites of eggs and a cup and a half of powdered sugar and beat them together. Stir over the fire until smooth and glossy two ounces of Baker's unsweetened chocolate grated, with half a cup of powdered sugar and four tablespoonfuls of boiling water, remove from the fire and stir while hot into the eggs and sugar, and when it is cool spread the top and sides, and set the cake in the oven for a moment to dry the icing.

EGG TIMBALE.

Beat six eggs without separating; add to them one-half a cup of rich cream, a one-half teaspoonful salt, a saltspoonful of pepper; grease ordinary custard cups; pour in the mixture; stand in a pan of boiling water, and cook in the oven slowly until timbales are set in the centre. Turn into a heated dish and pour around cream sauce.

HONEY CAKE (A NORWEGIAN RECIPE).

Two pounds of strained honey, three-quarters of a pound of light brown sugar, three-quarters of an ounce of bicarbonate of potash, pounded very fine and dissolved in a little water, one cup of cream, half a cup of melted butter, ginger, cloves and pepper to taste; stir this all well together, add to it as much flour as will make it like a thick mush, set it away until the next day, then turn it into a well-greased cake mould and bake about three-quarters of an hour.

Hints to Housekeepers.

Onion soup is often liked by people who disdain the savory herb in any other form. There is no doubt of the wholesomeness of the onion, and those who have never tried the soup are recommended to use this celebrated recipe of the elder Dumas. Take for three pints of soup, four Bermuda onions, or eight common white ones, mince them, and fry to a golden brown in two tablespoonfuls of butter. Pour in two quarts of water, season with pepper and salt, and boil until the onions are quite soft. Beat the yolks of three eggs, mix with the soup, and pour the mixture over fingers slices of toasted bread. Milk may be used instead of water in this soup.

Do not allow children to eat fruit skins. They are frequently filled with microbes which find in the stomach conditions favorable to their development. The downy bloom of the peach is especially liable to contain these microbes. All fruit should be washed before going to the table. Grapes may be easily cleansed by holding each bunch upside down under the cold-water faucet.

Here is a delicious relish from England: Shave about four ounces of soft cheddar cheese,—best dairy cheese is an excellent substitute,—and mix to a paste with an ounce of butter, a tablespoonful of salad oil and a teaspoonful of French mustard. Cut ripe tomatoes in half, scoop out part of the seeds, and fill with the cheese mixture. Sprinkle the top with minced chives.

Hemstitched note paper is a novelty, and bids fair to become popular. It is pretty and dainty in the pale shades now so much in vogue.

Sets containing a half dozen stickpins have for heads river pearls of various irregular shapes.

To keep a spoon in position when desirous of dropping medicine into it and needing both hands to hold bottle and cork, place the handle between the leaves of a closed book lying upon a table.

Do not stuff cobwebs into a cut unless you want pus to form, as cobwebs are rich in bacteria which produce pus. Instead, stop bleeding by the use of water as hot as you can bear it, and healing will take place in half the time.

Common alum melted in an iron spoon over hot coals forms a strong cement for joining glass and metals together. It is a good thing for holding glass lamps to their stands.

The rule seems to be, this season, that a gown should either be much trimmed or not trimmed at all. Among the new skirts is one that meets an extremely popular favor, fitting closely around the figure above the knees, and below there are three shared flounces, graduated in size, and mostly finished with an edge of white or black. These are made up in camel's hair cloths or velveteens and trimmed with bands of plain cloth on which are applied pretty motifs or small passementerie ornaments of black or white.

Rice can be used several ways for puddings and is wholesome and palatable. Here is a good one that is easily made: Take six ounces of whole rice, and when sufficiently boiled, stir in a tablespoonful and a half of suet, shredded fine; when that is melted, take it up, add one egg and two ounces of moist sugar. Boil these together three-quarters of an hour.

Fashion Notes.

*** White and black combinations in millinery will again be popular for the two coming seasons. Black and white fancy satins, velvet and velour weaves; black and white laces, feathers, aigrettes; black velvet ribbon overlaid with white silk passementerie; black velvet loops lined with white satin; large or small dress hats of white French felt or velvet garnished with black and white tulle, doves' wings, white birds with black wing tips and breast plumage, and white velvet poppies or water lilies with black or yellow velvet hearts.

*** Very few of the demi-dress gowns of the season are plain in effect. Nearly all have some sort of braidwork, small frills set one above the other, strappings and fancy buttons, tucking and lace en applique, etc. Quite half of the skirts now shown are finished with a hip-yoke trimmed with applied folds, soutache, all-over embroidery and shirring or faggoted bands. Novel and pretty black passementeries are used just now by French dressmakers, not only for trimming frocks for demi-dress wear, but also for walking and traveling costumes.

*** This is the season for velvets, velours, corduroys, veloutines, and similar fabrics of every sort, and the dry-goods merchants are calling attention to a new fast-black velveteen, manufactured, it is claimed, by a process, whereby the color will not rub off on the most delicate gloves or light linings. The goods are designed for costumes, jackets, and suits and dresses for little boys and girls.

*** Wool etamines in monochromes, and in Tartan effects woven in alternating light and heavy blocks are brought out in new color combinations, and mohairs, brilliantines, cashmeres, and a long list of corded materials in silk, wool and silk-and-wool mixtures are intended for fall and early winter tailor costumes and semi-dress gowns. Bridemaids' dresses of pale blue cloth are made with white satin garnitures, embroidered vests, and picture hats of chestnut-brown velvet trimmed with ostrich plumes and Flemish lace.

*** White wool hats are very prominent among the samples of fall and winter millinery. There are two styles, one of very fine velvet French felt, the other of white camel's hair, to correspond with suits of the same rough surface, and with zibeline, boucle cloth and similar hairy weaves.

*** Among the designs for fall and winter bridal gowns, there are many in princess form. For short, rather-stout women, this style of dress is a boon; for the former, wrapper-like effect is now wholly eliminated. Even when a costume made with a skirt and jacket is perfect of its kind, dividing the skirt and coat has a tendency to shorten and broaden the effect. No inexperienced dressmaker, however, can possibly make a success of a gown of this kind. All the pretty accessories are added to these gowns—the fancy blouse fronts, boleros, picturesque sleeves, collars, vests, etc.

*** The zibelines and vicunnas are particularly attractive this season, and some becoming tailor suits have been made from them.

*** Fancy medallions, lattice and scroll designs in open-work mohair and other silky wool braids, chenille, velvet, bits of fur, silk netting and cording—all in new applique effects, are used as garniture for stylish cloth and silk gowns. This form of decoration is more stylish than stitching or rows of braid, although these simple styles of trimming are still in high favor. The medallion and arabesque forms of decoration appeal more to those who are fond of striking color effects, and it is at this time of year that brilliant tones are most worn.

*** The use of white satin, fur, gold braid, laces and Russian guipure medallions is again a feature of cloth and velvet gowns, and handsome coats of various kinds for afternoon calls, receptions matinees, etc.

*** Tailor-made costumes of military blue cloth have the blouse bodices trimmed with rows of flat bullion and expensive buttons of gold and blue enamel. Suits in silver-blue faced cloth are silk-stitched and finished with slot seams, or again they have mink-trimmed Louis XV. jacket with vests of Persian brocade that show color mixtures of blue, red, fawn brown and goid. Silver braid is used on French visiting costumes of Russian blue, with vests of white satin strip d with gold and silver gimp, and Pingat sends to America among his other unique models, full-length garments of Danish red cloth elaborately trimmed with black Persian lamb and black silk cord brandebourgs.

*** The revival of overskirts or overskirt effects is exemplified in a French gown of sable-brown, satin-faced cloth, trimmed with taffeta bands. The skirt is in five gores, with a habit back, the lower portion expanding to the circumference of three and three-fourths yards. This flare is increased by the addition of narrow circular foot frills bordered with the taffetta strappings. Above this is a tunic or upper skirt, also shaped with five closely-fitted gores that flare gracefully on the lower portion into deep points that extend over the three skirt frills. The Eton blouse en suite is closely fitted at the back, and has narrow inserted vest pieces of white silk stitched to each side of the slightly open fronts, the joining of silk and cloth covered with rows of the brown taffeta. Small gold buttons in groups of three decorate the white vest pieces. Double cape collars (one of white silk, the other of strapped cloth) give graceful breadth to the shoulders, and a cloth and taffeta girdle defines the dip of the waist line. The bishop sleeves are finished with flaring cuffs lined with white silk and trimmed with a stitched band of brown taffeta.

*** A Pingat evening cloak of pale blue, kid finished cloth has a rather deep collar of dark mink, which turns down over a cape of ermine, which covers the cloak to below the elbows, and arches down some inches longer on the front. The cloak is lined with white satin, and is bordered with a band of mink at all its edges, including the ermine cape. The wrap fastens low on the front, below the dip of this cape, with a gold chain and clasp. A much less expensive cloak of white cloth, similarly shaped, but unlined, has no fur edgings, but merely a machine-stitched hem. The cape is formed of white Thibet fur, and the turn-down collar is of Oriental velvet, edged with a narrow band of sable.

*** Among tailor-made costumes all the hand some weaves in satin-faced cloth are popular. In one invoice of French wools the pastel shades are somewhat deeper, but at the same time even more beautiful than the artistic shadings of the past two years.—New York Evening Post.

The World Beautiful.

Lilian Whiting in Boston Budget.

"For what need I of book or priest,
Or sibyl from the mummied East,
When every star is Bethlehem star?"

. . . . . .

"And he who flagged not in the earthly strife
From strength to strength advancing—only he
His soul will knit, and all his battles won,
Mounts and that hardly to eternal life."

. . . . . .

In the lectures given before Yale College last week by Rev. Dr. George A. Gordon, the opening one discussed the need of a new theology. Dr. Gordon noted that during the past quarter of a century "a new scientific conception has had to be mastered—the conception of evolution. The history of life upon the earth has been rewritten, and it has had to be read. This new history of animal life has issued in an astonishing natural history of man. Even this amazing volume could have been mastered much sooner had not pride and prejudice stood in the way," continued Dr. Gordon, and he added: "It should be noted that the credit of mastering this new scientific conception of nature of animal life and of man, and of bringing it into harmony with the permanent intellectual and spiritual possessions of the race, belongs primarily not to scientific men, but to a poetic and religious genius and to men whose insight is due to the discipline of faith."

Intelligent thought realizes that there is no inherent antagonism between religion and science. For while any accepted theology is a matter of the time, Religion is eternal in its nature. Theology is a statement of belief, and the belief regarding the nature and destiny of the soul is as liable to partake of any contemporary limitations as may the belief held regarding the nature and movements of the stars. As knowledge advances, beliefs change and advance. More and more are the ideals of spirituality of life taking the place of creeds and theological tenets. To realize that all humanity are spiritual beings, now and here, and that a man does not become "a spirit" only after death, by means of some inexplicably mysterious process, but that he is a spiritual being now, involved in spiritual relations to a spiritual universe, is to realize the true conditions surrounding the present life; and this realization imparts hope, courage and faith to press on through whatever difficulties or barriers beset the way. Immortality is a condition of the soul, not a definite period in time. The soul, now and here, may put on immortality. Life is, after all, an affair of the immortal self, and it is the invisible powers which are its stay, its guide and its inspiration. We live and move and have our being on the divine side of things. We only live—in any true sense—as we are filled with the heavenly magnetism. "Thou hast made known to me the ways of life; thou shalt make me full of joy with thy countenance," says the apostle. Here is the true gospel to live by. There *are* "ways of life"; even through toil and trial they shall be reached. The one is is eternal, the other temporal. It is unwise to lay too much stress on the infelicities of the moment. Exaltation alone is real; depression is unreal. The obstacle before one is not intended to stop progress, but to stimulate new energies to the overcoming.

"By living so purely in thought and in deed as to prevent the interposition of any barrier between his phenomenal and substantial self; and by steadfastly cultivating harmonious relations between these two,—by substantiating the whole of his system to the Divine Central Will, whose seat is in the soul,—the man gains full access to the stores of knowledge laid up in his soul, and attains to the cognition of God and the universe. . . . Revelation is, no less than reason, a natural appanage of man, and belongs of right to man in his highest and completest measure of development."

The highest use of the Bible is not, after all, in rigidly subjecting it to the higher criticism. This intellectual excursion has its value, but far more profound, far more important is the value of the personal interpretation of the divine teaching to meet the personal need. The hour of the higher ideal life has come. The age of spirit is upon us; the age in which, after ages of evolutionary progress, man asserts his birthright as a spirit, dwelling in a spiritual world, and controlled by and controlling spiritual forces. Dreams and ideals are his material; visions are the feeders and creators of his achievements.

Religion is a life or it is nothing. Theology is another matter, and creeds and views have their adherents and advocates; but religion is psychic science, the knowledge of the soul, the knowledge of its capabilities, its powers, its methods of unfoldment.

Only so far as one lives the religious life, in the true significance of the term, does he live at all. To absolutely banish an evil and inharmonious thought; to close the door to envy, detraction, unkindness, self love; to utterly bar out resentment toward any human being, no matter what the cause; to hold one's life as, primarily, between himself and the Lord; to rejoice in the good and to be glad in the gladness of others,—this, surely, is the key to that state which would make earth heaven, and bring to every life the lilies of eternal peace.

The Brunswick, Boston.

Notes and Queries.

UNSEASONABLE WEATHER.—"R. W. C.": Professor Garriott of the United States Weather Bureau has studied the subject of what we call unseasonable weather on the daily meteorological charts of the whole Northern hemisphere and finds that the general atmospheric conditions over the United States that are associated with unseasonable weather in any part of the country are, in turn, associated with atmospheric conditions that prevail over the whole or, at least, a great part of the Northern hemisphere. The international charts plainly show that when a period of abnormal weather prevails over any considerable part of the United States there is also a disarrangement of the normal distribution of atmospheric pressure over a great part of our hemisphere. Unseasonable weather is thus not dependent on local, but on universal, causes. The study of the effect of solar disturbances, sun spots, magnetic storms and the like, may, perhaps, give the clue to explanations of what we term unseasonable conditions over small terrestrial areas.

MASSES OF THE PLANETS.—"Robert Harter": Illustrations and analogies have their value in teaching. They often show abstractions under a concrete guise that many minds find easier to realize. The table of the masses of the planets may be written: Mass of the earth = 1; of Venus = 0.787; Mars = 0.105; Mercury = 0.061; our moon = 0.013; Sun = 324,439; Jupiter = 310; Saturn = 92; Neptune = 16; Uranus = 14. A French writer transforms these values into money as follows: The mass of the earth may be represented by $4, of Venus by $3, Mars by $0.40, Mercury by $0.24, the moon by $0.05, Uranus by $56, Neptune by $64, Saturn by $368, Jupiter by $1240 and the sun by $1,297,756, approximately. One of the best illustrations of the sort is due to Sir William Huggins. If, he says, the fare on a celestial railway train were a penny a mile, the price of a ticket to the nearest fixed star would be the national debt of England. The idea conveyed is not definite, in one sense; on the other hand, the notion of a magnitude indefinitely large is very forcibly conveyed.

UNCLE SAM.—"Curiously Inclined": The popular title for the United States. In the year 1812, a large quantity of provisions for the army was purchased at Troy, N. Y., by Elbert Anderson, a Government contractor. The goods were inspected by two brothers, Ebenezer and Samuel Wilson. The last-named was invariably known among the workmen as "Uncle Sam." The packages were marked E. A.—U. S. On being asked the meaning of these initials, a workman jokingly replied that he did not know unless they meant Elbert Anderson and Uncle Sam. So the title became current among the workmen, soldiers and people, and the United States Government is known now by those who affectionately call it Uncle Sam.

LONGEVITY IN EUROPE.—"Old Lady": Servia contains more centenarians than any other country on the globe. In this little country, which has less than 1,300,000 inhabitants, there are actually 575 persons, according to the last census returns, whose ages exceed one hundred years. Ireland comes next in the list with 578, but then her population is very much larger than that of Servia. Spain has 401 out of a population of seventeen million, and France counts 213 among her thirty-eight million inhabitants. England, Scotland and Wales can only muster 192 between them, and Germany, with her enormous population of fifty-five million, has but seventy-eight. Norway has twenty-three out of 2,500,000 inhabitants, and Sweden a population of nearly five million and only twenty centenarians. Denmark has but two, and in little Switzerland there is not a single person whose years number fivescore.

Gems of Thought.

....The ineffable glory of our exalted Lord is most strikingly evidenced in the fact that the beloved disciple who was wont to recline on Jesus' breast in friendliest intimacy, afterwards, on beholding the body of His glory, fell at His feet as dead.—D. B. Ford, D. D.

....Choose for a wife the woman you would choose for a friend were she a man.—Joubert.

....This is the way to do a good day's work: Begin it with God; do all in the name of the Lord Jesus and for the glory of God; count nothing common or unclean in itself—it can be so only when the motive of your life is low. Be not content with eye-service, but, as servants of God, do everything from the heart and for His "Well done." Ask Him to kindle and maintain in your heart the loftiest motives, and be as men which watch for the coming of the master of the house. —F. B. Meyer.

....We see faces every day which have a good type, but have been marred in the casting; a proof that we are all entitled to beauty, should have been beautiful, if our ancestors had kept the laws—as every lily and every rose is well. . . . The man is physically, as well as metaphysically, a thing of shreds and patches, borrowed equally from good and bad ancestors, and a misfit from the start.—Emerson.

....To him who, neglecting the revelations of immediate duty, looks regretfully behind and fearfully before him, life may well seem a solemn mystery, for, whichever way he turns, a wall of darkness rises before him; but down upon the present, as though a skylight between the shadows, falls a clear, still radiance, like beams from an eye of blessing; and within the circle of that divine illumination, beauty and goodness, truth and love, purity and cheerfulness blend like primal colors into the clear harmony of light.—Whittier.

....A man who lives right and is right has more power in his silence than another has by his words. Character is like bells which ring out sweet music, and which when touched, accidentally even, resound with sweet music.—Phillips Brooks.

....Christians are to be separate from the world for leadership, not exclusion. They are to be in advance of the rest of the world in character and love, leading on to God.—The Watchman.

Poetry.

FAREWELL TO CATAUMET.

Farewell, farewell, Cataumet dear,
From out thy lovely scenes I part;
And oh, I fain would shed the tear
So much thy leave I take to heart.
This brooding soul that sought release
From worldly cares and aching strife,
Hath found in thee a perfect peace
Which only heaven could bring to life.

O'er fields so richly dressed in green
And through each wooded, shady dell,
The hand of Nature can be seen
To wake the bard's poetic spell.
Perched high upon the full-grown trees
The birds their carols sweetly sing;
And from the cool, refreshing breeze
The boughs majestically swing.

The squirrel with almost light'ning fleet
Doth scamper to its little nest;
For at the sound of human feet
The fear of death looms in its breast.
And when the dark'ning shades of night
Steal gently o'er the summer sky,
The owl appears, and thinks it right
To offer up its solemn cry.

Both Pagan * and myself we roam
To view the old-time rustic places,
And watch the farmers coming home
With honest-looking sunburnt faces.
Their simple speech and manners teach
That rural life is worth the living;
They seem to practice what they preach,
And, like our Saviour, most forgiving.

Such scenes like these the heart doth crave,
When Faith and Virtue are behind it;
It makes a Godly man more brave
And helps him keep his place and mind it.
New life creates within his being
And lifts him to a purer sphere;
When drinking in the good he's seeing
And acting it in truth sincere.

GEORGE MCKENZIE.

* A dog whom the writer was greatly attached to.

ONLY A WOMAN'S HAIR.

Only a woman's hair—a common sight—
Yet still with streaming eyes I gaze upon it,
My breakfast lies untasted while I write
This sonnet.

Only a woman's hair. The time that was,
The years that were, the gay and gladsome days
Of my past youth rise up before me as
I gaze.

Only a woman's hair.
I would have loved it dearly; who can doubt it?
But as it is, I think there's something queer
About it.

Only a woman's hair. It seems a sin
The plain, the bare, unvarnished truth to utter—
I really cannot, cannot like it in
The butter.

—J. Oliver Curwood, in Lippincott's Magazine.

A WINTER'S NIGHT.

Heigh-ho! for a winter's night,
And how do the dead men sleep?
They shiver not when the keen frosts bite—
No winters make them weep.

They hear no moan of the weary earth,
There—on a dreamless bed,
The while I bend o'er a flameless hearth
And munch at a crust of bread.

Far from the wrath and wfongs of life,
'Neath the wings o' the dark they rest,
While I am lost in the raging strife,
With the red wounds on my breast.

For a dead man's neither rich nor poor,
Under the light and rain;
The blast and the bailiff at his door
Knock and knock in vain.

And the gods may grant, or the gods deny
Gifts where the homeless roam,
But he recks not there if the daisies die,
Or fleck his grave like foam.

But—better a crust this winter night,
From the wealth o' the world apart.
With the memory bright of your eyes of light
And the life of your lips, sweetheart.

—Atlanta Constitution.

TWO ROCKS.

Think the white rose is so white because
Love breathed into it every holy thought,
And garbed it in the chasteness of the stars
To make a fitting chalice for his heart;
Until, apart from every painted thing,
Unkissed to color by voluptuous suns,
Joins the quiet cloister of the spring
Among a white-robed sisterhood of nuns.

Think the red rose is so red because
Love burned it from desire and the whole
Density and fire of the stars,
And in its crimson bosom laid his soul;
Till, drunk with all the passion of his themes,
And glowing with the warmth of countless springs,
Joins the mad procession of his dreams,
A wanton in the world of blooming things.

Think, somehow, that if the chance befell
Which urged a choice among his flower host,
That Love himself would find it hard to tell
Which one, betwixt these two, he loved the most!

—Ella Bentley, in New Orleans Times-Democrat.

...To keep one's eyes upon the stars
And strive for Heaven is sweet,
But not at risk of tumbling in
The mudhole at your feet.

...A baby in Kalamazoo
Remarked quite distinctly: "Goo-goo,"
'Twas explained by his ma,
And likewise by his pa,
That he meant to say: "How do you do?"

—Judge.

....Now to the winds with politics,
To greater measures bow;
The strongest "sphere of influence"
Must be the football now.

—N. Y. Times.

Miscellaneous.

The House on the Uplands.

The great Tantremar Marsh is a noble expanse of diked land at the head of the Bay of Fundy. One hundred and sixty years ago it was an important section of the debatable ground between the French and English powers in North America. Today it is famed for its harvests of rich grass, for the wild fowl that flock in with the high tides of spring and autumn and for the storms which rake it from end to end. One used to hear also by times the tale of the House on the Uplands, though the place has fallen to ruin now. It was my fortune to witness the denouement of that strange story. The thing was unusual and not a little sad. It took place during a holiday month spent on the borders of Tantremar. Looking back now, the events seem to follow from a certain afternoon in August.

I was riding my wheel along the road skirting the wide marsh which stretched away on the left until it merged in a line of rolling hills. To the right was the gradual ascent of the uplands, with here and there a farmhouse or a clump of spruce trees. In front and far away the dark waters of Fundy brimmed to the blue Nova Scotia coast and the free horizon. The scene showed full of color, for the low sun was lighting up all the countryside. The tall marsh grass stood yet unharvested, so that over the whole expanse of Tantremar it surged and rippled in wave-like lines as the wind swept across. Everything was peaceful, and even the hard, level road could not tempt me beyond a very moderate speed. I moved slowly forward until I came to the summit of a long slope.

For some distance past I had been vaguely conscious of a house that seemed to dominate the highway just at this point. When I reached the top of the rise my indolent consciousness suddenly became stronger, and I glanced quickly at the house. It was a big square building, painted a dead white, and standing on a knoll back from the road. Several huge elms were scattered about. A garden lay in front, bright with flowers, and through this a short path led to the door. This much I took in at a glance; a second served to produce another impression—there was something unpleasant about the place.

As I drew abreast of the garden a figure rose from among the tall flowers and hailed me. I dismounted and approached the gate, where an old man was standing. He spoke in a singularly gentle voice.

"Sir," said he, "have you passed any one lately, coming in this direction? A tall man, it would have been, on horseback."

"No," I answered, "the road seemed deserted this afternoon."

The old man looked at me wistfully, sighing as if much disappointed.

"Whom are you expecting?" I ventured—a little touched, I must admit, by his aspect.

"It's my brother," he replied. "My brother James. I've been looking for him these many years, but this summer I know he's coming back, and we'll go off to England together—to England—home"—and again he shot that wistful glance at my face

"To England!" I exclaimed. "That's a far cry from Tantremar. But I am hot and thirsty. Can you give me a drink of water? Then, if you will, you can tell me about your brother. I am going to the village, and perhaps may see him there."

The old man's face lighted up eagerly. He opened the gate, which sagged heavily back on creaking hinges.

"I take this right kind of you, sir," he said. "Come up to the house and accept my hospitality."

As he led the way up the garden walk I noticed that every flower and shrub showed signs of careful tending; the garden was small, but beautifully laid out. A nearer view of the house, however, explained the unpleasant impression which it had produced upon me. The place was empty. The windows, curtainless in the upper story, stared vacantly out over the marsh and the distant bay; the bravery of fresh paint served only to heighten the desolation of it all. For it was desolate, I thought. There was no busy cackle of fowls about the barnyard close by; there were none of the common, kindly sounds of the farm. A crow flew solemnly overhead and the sun cast long shadows from a group of fir trees at the back.

The old man turned to me when we reached the house.

"I am afraid," said he, "that James' horse may shy at that machine of yours if he comes up to the house and passes it. I hope you won't mind putting it to one side."

"Certainly not," I replied. "I'll put it here around the corner."

Within the house the rooms were large, and as we entered one of them from the wide hallway a smell of mus y age came to my nostrils. My host threw open some heavy shutters and the sunlight poured in, revealing an old-fashioned parlor with furniture in the fashion of a generation back—massive, dark and rich. All was on a far grander scale than that of the farmhouses round about.

I sat down, but no sooner had the old men left the room than I started up again with the peculiar sensation that some one was watching me. I glanced hastily around. The light flooded every corner, and no hiding place was visible unless it should be behind the heavy window curtains. Half ashamed of myself, I went over and pulled them aside. Then I turned back, and instantly my attention was seized by a portrait which hung above the mantelpiece. It was the mournful face of a man, with eyes that followed one's every movement. This explained my uneasiness—I had unconsciously caught their gaze fixed upon me.

At this moment, however, my host returned with the water. As I drank he pointed to the picture, saying:

"That is my brother, before he left. A many years ago, sir! A many years ago! But I'll tell you about him."

We both sat down, and for a space an utter silence wrapped us while the old man gazed earnestly at the portrait over the mantel. This is the story he told me—in monotonous accent, with never a smile lighting his dim eyes:

"It's forty years since I came out from England. And I'm not an old man yet, though my gray hairs make me look so, for I've had much trouble in the past. But it's near over now, and when James comes we'll pack up the things and go home again.

"James and I came out together; we were always together—together at school, and we should have gone to the university together, but that my father cast me off one day, in a fit of rage, because I would not do a certain thing he wished. Then James said—I can recall his very words: 'Cheer up, old fellow, I'll stick to you.' When my father learned this, and saw that James would keep his word, he was bitter sorry for what he'd done. But he wouldn't forgive me, and he couldn't turn James against me. So he gave James £1000 in gold and a part of the household furniture—you see it about us now—and we came out here together.

"Land was cheap, so we bought a farm and built this house. The life was rough, and never a letter came from home; but there was always a deal to look after, and by and by we grew to love the marshes and the big tides of the bay. It was lonely sometimes in the long winters, but we soon accustomed ourselves to that. The worst was when the autumn storms came up the bay, for then often the dikelands would be flooded, and our cattle and sheep be in danger. And sometimes there would be wrecks of good ships"—he paused, with a puzzled expression, then hastily resumed:

"But one summer James fell sick. I can't recall the year—my memory is not what it used to be. I am much alone, sir. But James fell sick, and I was hard pressed to bring him around. He recovered at last, and then I showed him a letter which had come for him. It was from our father's lawyer, and it told us that the father was dead, and James, as the eldest son, should go home to settle up the estate. Never a word of forgiveness, mark you, from him that was dead! He was a stern man. Now this was a good thing for James, meaning change of air and a long sea voyage to put new life into him. I went with him as far as Halifax, where he took the Cunard steamer.

"Yet sometimes now I wish he'd never gone He was sad at leaving the farm. I—"

The speaker stopped and moved restlessly in his chair. Suddenly he turned to me and said:

"You think he will return soon, do you not?"

"Why, yes," I replied, somewhat surprised by the question; "I don't see why he shouldn't."

Once more the old man gave his peculiar, wistful glance. Then he went over to the picture above the mantelpiece.

"It fell down one night long ago," he said, as if to himself. "There was a storm and I was away—somewhere—I forget where. The rain was flooding the marshes and the wind was howling up the bay. God help the poor ships out that night! And when I came home the picture was lying on the floor." He ceased. There was a long silence. Finally, he struck his forehead impatiently. "I cannot remember what happened that night. The storm and the darkness, and—where was James? But it doesn't matter now, for he's coming home soon." . . . Another pause followed, which lasted until I rose to leave.

Going down the garden path he stopped and called attention to his flowers.

"I am getting all in order for James' homecoming," he explained. "He is fond of bright flowers."

"I'll look out for your brother in the village," I rejoined. "I think I'd recognize him from the picture."

"I'm greatly obliged to you for your kindness," replied my companion. "Tell James to hasten out, for I've long been waiting for him!"

At a curve in the road I glanced back and waved my hand. The old man was still standing at his open gate in the gathering dusk, gazing after me.

The village was only a few miles away, and I soon arrived there. My stopping place was a small hotel which overlooked the head of the bay. As I sat outside smoking in the cool of the evening the landlord joined me for the customary chat.

"Well," he began, "how fur did you git today?"

I told him, and then related my experience, touching lightly on the old man's story.

"So he stopped you, did he?" said the landlord, with a chuckle, "and told you 'bout brother James? Well, you ain't the fust, not 'bout a thousand, that old Jarge Montague has told the same story to."

"What do you mean?" I asked.

"This is the how of it," answered the landlord, tilting his chair into a more comfortable position. "I was a lad at the time, but I can remember I all right. Him an' his brother come out from England—that's all right. An' then his brother got took sick an' went home when the old man died—that's all right. But now I'll tell you what old Jarge didn't tell you. James Montague did come out here again, but he warn't alive when he landed. He landed from a wreck with a hole busted in his skull."

Seeing my amazed look, the speaker proceeded to explain.

"He come out to Halifax in a Cunard steamer; she was called the Scotia, I guess—one of them big paddle boats that used to run in the old days. That was 'way back in the sixties. Then he took passage in a schooner for the village here. She was called the Curlew. She got round safe an' come up an' near reached the head of the bay, when a big storm an' high tide got her, an' she was wrecked ha'f a mile below here, an' every soul drownded. Old Jarge—he was young Jarge then—had come into the village with a couple of hosses fer himself an' his brother to ride out to the house. The fust he seen of his brother James was when he was washed ashore, with his head cut up ter'ble. Old Jarge didn't say nuthin'—jest seen about the berial, and then shut himself up in the big house. That was thirty years ago. Lately he's taken to stoppin' people on the road an' askin' if they has seen his brother James. We mostly laffs at him, but I guess it's kinder rought on th' old feller."

I often saw the old man after this, and he was invariably moving about his garden, which seemed daily to grow in beauty. He greeted me always with the same wistful question, and for pity of his loneliness I always answered him kindly.

Hitherto the summer had been free from bad weather. Day after day the sun made glorious the wide marshes and the surging tides of the bay. At last, one night late in August, I saw a huge wall of cloud blotting out the stars to the south and west and went to bed with the sough of rising wind in my ears. In the morning the landlord announced that the storm would come in with the tide. Despite his warning, however, I set out for an afternoon ride along the upland road. The sky was dark, the bay flecked with whitecaps. But I missed a familiar hail from the roadside, for no one was visible as I passed the big, white house, where the flowers were brighter than ever under the dull clouds.

The road was so good and the air so bracing that I was many miles out before I thought of turning. When I did the dusk was gathering down and the huge marsh looked dim and lonely. The storm was coming in good earnest, for down over the bay a swift flame of lightning leaped forth, followed by a growl of thunder. There was no time to lose if I wanted to escape a wetting. But I soon found that the return journey was no easy matter. The wind met me in wild gusts which rapidly increased in force, making progress more difficult. With this there was the growing darkness and now and then a spatter of rain. I fought steadily on, however, and was halfway home before night shut in. But night brought the full fury of the tempest. Soon the lightning was my only guide. It proved a safeguard, too, for while going fast down hill a flash revealed a fallen tree scarcely ten feet away. I did not wait to see what would happen, but slid off and rolled in the mud, leaving the bicycle to its fate. Then I trudged manfully on afoot, trundling my wrecked machine, while the wind shrieked in my face and the rain drenched me to the skin.

At last, far ahead, a light appeared. Then another and another, until a brilliant glow shone into the darkness, and then, quite suddenly, I recognized the outline of the house on the uplands. But what the reason of this illumination? There was a light in every window. I hastened forward and soon stumbled through the gate, up the pathway to the front door, where I knocked loud and long. It was thrown open and my old friend appeared, gazing eagerly at me.

"Why! Why!" he exclaimed. "It's you! I thought it was James!" and a look of deep disappointment came over his face. "Have you seen him?"

"No," I answered, and the light fell full on my soaked and muddy garments. The old man gave a cry.

"I treat you ill!" he said. "Come in, come in! and you can get dry, and we can welcome James together. For you do not sneer and laugh as the others do." He drew me in and shut the door. We went through the hall, catching a glimpse of bright-lit parlors as we passed, to the big kitchen at its farther end.

Here a huge fire blazed and I was quickly dry. The old man gave me a hot drink from a brew which simmered beside the hearth. It put new life into me.

"Is your brother really coming tonight?" I asked, determined to humor him.

"Yes, oh yes!" he cried tremulously. "See, read this!" With shaking hands he unfolded a sheet of paper and gave it to me.

It was a letter, frayed and worn, dated thirty years back. It said that the writer had arrived in Halifax by the steamer Scotia, of the Cunard Line, and would come round by schooner, avoiding the tedious coach journey.

I purpose to come round in the Curlew schooner, which sails within a week. Have the House ready for me, George, and a Jorum of that good Punch you used to make so well. I will drive out from the Village. And I shall be right glad to be Home again, Old Fellow, for we had a rough voyage across.

I am, dear George, Your Affect. Bror.,
JAMES.

So it concluded. The signature was stained and blurred. And as I handed back the letter, and the old man folded it so reverently and replaced it in his pocket, the pity of it all brought tears to my own eyes. But my host was looking at me expectantly, so I forced a smile and talked to him of the returning one.

How the storm thundered outside! I saw that it would be almost impossible to reach the village, and gladly accepted the old man's proposal that I should stay with him. "For," said he, "it will be pleasant for James, and I would like you to know him."

When my clothes were dry, we went over to the house together. It was ablaze with light. Wax candles were placed in every window and the sombre parlors were gay with old-fashioned lamps.

"We brought them all out when we came," explained the old man. "And James will be glad when he sees the lights shining to welcome him home."

"But will he come such a night as this?" I said, as a gust of wind shook the house and jarred us where we stood.

"Yes, oh, yes." The voice was very weak. "They told me this afternoon that the Curlew was in the bay, and I know James is coming tonight!" He went to a window. "Hark! Don't you hear a horse?"

But it was only a rain-squall driving along the road.

The wind gradually shifted, and when we returned to the kitchen the storm was thundering at the front door and echoing in the hall. Several times it tore at the entrance like a living thing—so like that I half turned round, while my companion started from his seat. Soon, however, my fatigue began to overpower me. Even the increasing nervousness of the old man could not keep me awake. I was rapidly nearing the borders of a slumber when the storm, which had dropped for a moment to utter silence, came roaring over the marsh anew. It struck the house, it hammered at the door, and the door flew open with a crash.

The old man sprang up and started out into the hall; then, uttering a low cry of "James! Welcome home at last!" he rushed from the room. And upon the moment a giant blast swept through the house; instantly all was in darkness. I felt my way cautiously along the hall until I stumbled over something on the rain-lashed threshold.

It was the old man. I carried him into the kitchen and lit a candle. He lay very still, with a smile upon his face—I had never seen him smile before. And when morning came I was glad that he could not wake to see his bright garden ruined by the storm.—A. B. DeMille, in the Independent.

Youth's Department.

DOLLS' SLUMBER SONG.

Hushaby, my babies, now the day is closing,
All the tired little birds are drowsing in the nest;
Out upon the lake the lilies are reposing,
And so must you, my little ones, upon your mamma's breast.
S-l-e-e-p, sleep, sink, sink to sleep—
Claribel and Muriel, Polly and Bo-peep.

Hushaby, my dearies, now the dew is falling,
Over on the meadow evening shadows creep.
On the edge of Slumberland hear your mamma calling,
"Come, my little family, it's time to go to sleep."
S-l-e-e-p, sleep, sink, sink to sleep—
Claribel and Muriel, Polly and Bo-peep.
—Ethelwyn Wetherald, in Youth's Companion.

A Twilight Game.

It had been raining all day. It was almost dark, and the children were getting dangerously tired of each other when Miss Lambert came up into the nursery. She lighted the fire on the hearth and drew up an easy chair; then she settled back in it and looked over at Alice and smiled.

"What is it?" questioned Alice, feeling very happy all at once.

"The world is so full of a number of things, I think we should all be as happy as kings," quoted Miss Lambert.

"Tell us the rest," exclaimed Alice, eagerly.

"That's all," replied Miss Lambert, still smiling.

But the children, sure that something nice was coming, settled themselves, each on an arm of Miss Lambert's chair, and waited.

"Well, we'll play a game," said Miss Lambert. "I'll mention one of the 'things' and then commence to count ten. Before I have finished, Alice must mention one; and so we'll go round and round. The one who fails to think of a thing (a beautiful thing, of course) must pay a forfeit. She must learn Mr. Stevenson's 'Nest Eggs,' and recite it Sunday morning at breakfast. Now I'll begin: A road winding through the woods—one, two, three, four—"

"Red lilies growing along the road," shouted Alice; "one, two, three, four, five, six—"

"Candy! pink and white twisted sticks," said Elizabeth, solemnly.

"Count, dear," reminded Miss Lambert, for Elizabeth had forgotten present duties.

"One, two, three—"

"An old farmhouse with children inside, and an apple orchard near; one, two—"

"A nice big fire," cried Alice, stretching her feet out toward the blaze; "one, two, three, four, five, six, seven—"

"Kittens," said Elizabeth gazing lovingly at a stuffed cat lying upside down on the hearth.

"Aren't you going to count?" asked Miss Lambert.

"One, two, three—" commenced Elizabeth.

"A field of grass with the wind sweeping over it—one, two, three, four—"

"A stone wall," shouted Alice, "with all the things growing side of it; wild roses, hardback, grapevines—one, two, three, four, five—"

"Babies," said Elizabeth, beginning at once to think up for next time, and forgetting to count as usual.

"Mammas that sing softly to the babies," said Miss Lambert, following Elizabeth's lead.

"Uncles that tell stories," shouted Alice, springing into the arms of a big man who suddenly appeared in the doorway.

"Oh, Uncle Jack, you play too!" cried both the children at once, and then such fun as followed!

Uncle Jack had to pay a forfeit because he couldn't think quickly enough, and then after that he thought of lots of jolly things: gulls' eggs and full-rigged ships, and big waves that dash over boats, and the American flag, and everything.—The Outlook.

The Muskrat and the Boy.

A boy who often used a path along the banks of a river caught sight of a muskrat on the bank of the stream one afternoon. He was looking around for a stick or a stone to throw at the animal when the muskrat said:

"It would be no use for you to throw at me, as I would be under water as soon as you raised your arm. You would better come here and have a talk. A boy of your age should know all about the animals to be found around his home. I suppose you have seen a muskrat before?"

"Lots of times," replied the boy.

"And why do they call us muskrats?"

"I don't know."

"Your teacher in school probably could have told you. It is because we carry a little bag of musk with us. Whenever you smell the perfume you may remember that it comes from us.

"One drop of musk will scent your clothes for a year. It is not much used in America, but in Europe, especially in the olden times, it was a favorite perfume.

"Kings used to use so much of it that you could smell them rods away, and very often it was sprinkled over the mortar and plastered upon the walls of churches. Did you ever ask anybody how I lived?"

"You must live like the woodchuck," replied the boy.

"Not at all, young man. The woodchuck has a burrow in a bank, and always seeks dry ground, while I have a house in a swamp or marsh, and spend much of my time in the water.

"When I do not build a house I make my home in a hole in the bank. Let me tell you I can swim almost as fast as a fish, though I can't stay under water more than eight or ten minutes at a time.

"Had I been afraid of you I should have made a dive and swum clear across the river before coming up to breathe."

"I should think you would get water in your ears."

"Do you know why I don't? It is because nature has provided me with little valves in my ears to shut the water out. If you dive you get water in your ears, and there is roaring in your head; but nothing of that sort happens to me. I can hear under water almost as well as when I am on the land.

"If you open your eyes under water they ache, but mine do not; and no matter how muddy the stream is, my eyes never get sore. I am like a fish about that."

"What do you eat?" asked the boy.

"Grasses, roots and barks mostly; but sometimes I nibble at apples and vegetables. I can always find plenty to eat, winter or summer, and I never have to go far from the water."

"I see you are looking for a hole in the bank, but you won't find one. I dig into the bank below the surface of the river, so that no one may know where I live. I can dig like a woodchuck, and my burrow is sometimes ten feet long.

"The chamber at the end of it is far above water, so that I have a dry bed when I wish to sleep. Sometimes the river rises and drives me out, but in such cases I make my bed in the coarse grass along the edges. Didn't you ever see a muskrat's house in a swamp?"

"No, I never did."

"Well, we build a house almost like the beaver, except that we use grasses instead of sticks and limbs. We plaster the roof with mud, and we have two and three rooms inside, and we always enter and leave them from below.

"I have been in a house when the hunters came out on the ice and broke their way through the top, but I was swimming away at the first alarm. The only way to catch us is to set steel traps for us at the mouth of our burrows. We are not as cute as the mink or beaver, though some of us die of old age and never get a foot into a trap."

"I have seen caps and capes and muffs and gloves made of muskrat fur," said the boy.

"Of course you have," said the muskrat, "and let me tell you that the furriers dye our skins and sell them for what they are not. Some of the capes called American seal are nothing but American muskrat. However, there is a big demand for our fur for what it is, and men hunt us so closely that in a few years more there will be none left."

"When a muskrat is caught in a trap what does he do?"

"He makes a great struggle, of course, and does his best to pull his foot out. Sometimes he gnaws his leg off, the same as a beaver, but if the trap is under water he generally drowns before anything can be done.

"I once caught the end of my tail in a trap and lost two inches of it in getting away, but it grew out again after awhile. Had my leg been caught, I should not have had the pleasure of this talk with you. I'm going now, and you can remember what I've told you and relate it to the other pupils in your school."—New York Sun.

Popular Science.

—The inertia of a two thousand-pound automobile at seventy-five miles an hour is calculated by E. Hospitalier to be the same as would be given by a fall of 196 feet. The retarding power developed by the brakes on the frail tires must average about sixty-horse power, though the maximum strain may be nearly twice as great.

—Investigation about a year ago showed that the balata tree grows in abundance along thousands of miles of the Amazon and its tributaries, but that the Brazilians were rapidly cutting the trees for firewood and building material. Since then the production of gutta percha from this source has been begun. Each tree yields an average of 3½ pounds, and a competent bleeder can prepare forty to fifty pounds per day, one man's work producing as much sap as twenty men can get from rubber trees. The gum is ready for shipment after being fermented and then dried.

—Casks of corkwood, the recent invention of a resident of Algeria, are claimed to have important advantages. Cork being a bad conductor of heat, liquids are protected from freezing on exposure to cold, and perishable substances are preserved from heat in warm climates. An interior coating keeps the content from contact with the cork. The staves do not warp, and an eleven-gallon cask weighed on thirty pounds instead of the eighty pounds would have been its weight in ordinary wood.

Curious Facts.

—Three thousand newspapers and one thousand letters are received by King Edward every day.

—Last year sixty ocean-going steamers were engaged exclusively in the banana trade.

—Novel first-aid-to-the-injured boxes are to be scattered in the streets of Paris. Outwardly the apparatus resembles a lamp-post letter box, and it contains a small medicine-chest, a folding stretcher and a telephone for signaling the nearest ambulance station. Access to the box is gained by breaking a glass panel.

—It was disclosed by examinations made in the Washington city postoffice, covering a period of about two and a half months, that 979,820 pieces of paid matter and 5,900,000 pieces of unpaid (or "franked") matter of all classes went through, the unpaid matter on some days running as high as 135,000, 127,000, 126,000, 125,000 and 122,000 pieces, while the percentage per day would often go to about ninety, crawling up as high as ninety-three per cent. on a single day, and averaging 85⅞ per cent. every day.

—Of the four hundred inscribed clay slabs found in the ruins of Babylon by the exped tion sent out by the German Oriental Society, but two have yet been deciphered, one explaining the Babylonian cuneiform characters and the other containing the litany chanted by the singers of the temple of Esagila on the return of the god Marduk to his sanctuary.

—Fishes are without eyelids, properly so called, and as the eye is at all times washed by the surrounding water, that gland which supplies moisture to the eye is not required and therefore does not exist.

Brilliants.

It is the mind that maketh good or ill,
That maketh wretch or happy, rich or poor;
For some, that hath abundance at his will
Hath not enough, but wants in greatest store;
And other that hath little asks no more,
But in that little is both rich and wise,
For Wisdom is most riches; fools therefore
They are which fortunes do by vows devise,
Sith each unto himself his life may fortunize.
—Spenser.

The child must be a child, the man a man;
And surely He who metes as we should mete,
Could we His insight use, shall most approve,
Not that which fills most space in earthly eyes,
But what—though Time scarce note it as he flies—
Fills, like this little daisy at my feet,
Its function best of diligence in love.
—Thomas Burbidge.

He was a hero, fighting all alone,
A lonesome warrior, never one more brave,
Discreet, considerate and grave.
He fought some noble battles; but he gave
No voice to fame, and passed away unknown.

So grandly to occasions did he rise,
So splendid were the victories he planned,
That all the world had asked him to command
Could it his native valor understand:
He fought himself, and, winning, gained the prize.
—Eugene F. Ware.

Then all the treasures of that brilliant state
Are gathered in a mighty funeral pyre;
October, like a king resigned to fate,
Dies in his forests with their sunset fire.
—Walter Malone.

Oh, Coming Year! May each day's page be bright
With golden words Love's own fair hand shall write;
And may thy treasured leaves be sweet as those
Tween which lie clasped the petals of a rose.
So shalt thou stay like some long-cherished book
Through which the heart still fondly loves to look,
And in its hours of retrospection sees
A wreath, deed-wrought, of fadeless memories.
—Nixon Waterman.

Home Dressmaking.

Hints by May Manton.

4264 Shirt Waist, 36 to 46 bust.

4236 Girl's Double Breasted Coat. 2 to 10 years.

Girl's Double-Breasted Coat. 4236.

To be Made With or Without Capes.

Double-breasted loose coats are in the height of style for little girls and are charmingly becoming as well as smart. Small capes over the shoulders are a feature and are much in style, but the coats are correct either with or without. This very pretty model allows of a plain finish or the capes, as preferred, and is suited to all coat and jacket materials, but, as shown, is made of Rhone-blue melton cloth, stitched with black corticelli silk, and is closed by means of cut-steel buttons and buttonholes.

The coat is cut with loose fronts and backs that are shaped by means of a centre seam, and is fitted by means of shoulder and under-arm seams. The capes are circular and curve up at both front and back to make a most becoming effect. At the neck is a turn-over collar. The sleeves are two-seamed and are finished with roll-over flare cuffs.

The quantity of material required for the medium size (6 years) is 1⅞ yards 44 inches wide or 1¾ yards 52 inches wide.

The pattern, 4236, is cut in sizes for girls of 2, 4, 6, 8 and 10 years of age.

Woman's Shirt Waist with Under-Arm Gore. 4264.

To be Made With or Without the Fitted Lining.

Shirt waists made with under-arm gores are specially desirable for stout figures and are to be commended most heartily. They admit of snugger fit than any other sort and can be made far more trim and smart when the object is to reduce apparent size, as each additional seam means an additional vertical line, and vertical lines tend to give a slender effect. The stylish model shown suits all waisting materials, silk, wool, linen and cotton, but as shown is made of embroidered henrietta in sage green and is stitched with black corticelli silk.

The foundation lining fits smoothly and snugly and closes at the front separately from the inside. The waist consists of fronts, back and under-arm gores and is bloused slightly at the front, but drawn down smoothly at the back. The sleeves are in regulation style, with straight cuffs that close at the back. The neck is finished with a stock collar that is worn with turn-overs of lace. At the waist is a belt with fashionable postillion at the back.

The quantity of material required for the medium size is 4 yards 21 inches wide, 3¼ yards 27 inches wide, 3 yards 32 inches wide or 2¼ yards 44 inches wide.

The pattern, 42 4, is cut in sizes for a 36, 38, 40, 42, 44 and 46-inch bust measure.

4265 Walking Skirt, 22 to 30 Waist,

4267 "Model" Waist Lining, 32 to 46 bust

Woman's Model Waist Lining. 4267.

Perforated for Round or Square Low Neck, Elbow Sleeves and Three Different Lengths.

Perfect fitted linings are essential to well-made gowns. Without them it is useless to hope for style or correct lines. The excellent model shown is carefully shaped and fitted and can be made with high neck, low square or round neck, long or elbow sleeves and either the full length shown or cut off at the indicating lines. With its help all fitting becomes a simple and easy task, for upon it can be arranged a waist of any sort that may be preferred, for which reason dressmakers would find it to their advantage to order it in all sizes. The original is of taffeta, that material giving greatest satisfaction, but all linings can be used.

The lining consists of front, backs and under-arm gores, and is cut in extra large sizes, so rendering it available for stout as well as slender figures. The fronts are fitted by means of double bust darts and are closed at the centre. The sleeves are two-seamed and fit with perfect smoothness.

The quantity of material required for the medium size is 3¼ yards 21 inches wide or 2 yards 36 inches wide.

The pattern, 4267, is cut in sizes for a 32, 34, 36, 38, 40, 42, 44 and 46-inch bust measure.

Woman's Walking Skirt. 4265.

Perforated for Dip in Front.

Walking skirts that flare freely and gracefully about the feet are in great demand, and are shown in various forms. This novel design is at once becoming and chic, and is suited to all skirting materials, but, as illustrated, is of boucle homespun in shades of brown stitched with corticelli silk.

The skirt is cut in five gores, and is lengthened at sides and back by a circular flounce joined to its lower edge. The lower edge of each side and back gore is cut to form pointed straps that extend over the flounce and make an exceedingly smart effect. The fullness at the back is laid in inverted plaits that are stitched flat for a few inches below the waist line. The upper edge can be finished with the belt or cut in dip outline and either faced or bound.

The quantity of material required for the medium size is 6½ yards 27 inches wide, 4½ yards 44 inches wide or 3½ yards 52 inches wide.

The pattern, 4265, is cut in sizes for a 22, 24, 26, 28 and 30-inch waist measure.

4268 Misses' Coat, 12 to 16 years.

4269 Blouse or Shirt Waist, 32 to 40 bust.

Misses' Coat. 4268.

To be Made With or Without the Capes.

Loose coats make the feature of the season for young girls as well as for their elders, and appear in many variations. This smart model includes the fashionable slot seams, one of the newest sleeves, and the shoulder capes that are so much in vogue; but can be made without these last when a plainer garment is desired. As shown, the material is zibeline in wood brown with tailor stitching of corticelli silk and trimming of fancy braid and metal buttons, but all cloaking materials are appropriate.

The coat is cut with loose fronts and backs that fit loosely and is laid in inverted plaits stitched to give the slot seam effect. At each front, on the line of the slot seams, is inserted a pocket that adds greatly to both the convenience and style of the coat. The sleeves are slightly bell-shaped, and are finished with roll-over cuffs. The little capes are circular and can be used or omitted as preferred. At the neck is a roll-over collar that fits snugly about the throat. The right side of the coat laps well over the left and is held by buttons and loops, but buttons and button-holes can be substituted whenever they may be desired.

The quantity of material required for the medium size (14 years) is 3 yards 44 inches wide or 2½ yards 54 inches wide.

The pattern, 4268, is cut in sizes for misses of 12, 14 and 16 years of age.

Woman's Blouse or Shirt Waist. 4269.

To be Made With or Without the Fitted Lining an Shoulder Straps.

The foundation lining is snugly fitted and closes at the centre front, but separately from the outside. The waist proper consists of a plain back and fronts that are laid in inverted plaits at the shoulders, which provide becoming fullness over the bust, and in a box plait at each edge. The back is drawn down snugly in gathers at the waist line, but the fronts blouse slightly over the belt. Over the shoulder seams are applied straps that give the fashionable long-shouldered effect, but which can be omitted when a plain finish is preferred. The sleeves are the regulation ones with cuffs that lap over at the inside seams. The closing is effected invisibly by lapping the right edge well beneath the left box plait and so bringing the two together at the centre front. The neck is finished with a stock elongated in bishop style, and at the waist is worn a shaped belt to which the postillion is attached.

The quantity of material required for the medium size is 4¼ yards 21 inches wide, 4 yards 27 inches wide, 3¼ yards 32 inches wide or 2½ yards 44 inches wide.

The pattern, 4269, is cut in sizes for a 32, 34, 36, 38 and 40-inch bust measure.

HOME DRESSMAKING.

SPECIAL PATTERNS—For a catalogue of any pattern illustrated on this page, send 10 cents (coin or postage stamp), state number, shown on cut, and size wanted, and write your name and address distinctly. Mail orders filled promptly. Address MASSACHUSETTS PLOUGHMAN, Boston, Mass.

The Horse.

Live Stock Notes.

The expert judge who judged the swine at the Central Canada Exhibition said that Canadian breeders are now developing a more uniform type of hog than are the British breeders. The standard hog in Canada is now a long, deep animal. In Great Britain there seems to be no uniform type, but each breeder has a type of his own, which is large or small as he fancies, and the prizes will be awarded at the English exhibitions according to the preference of the judge who examines them. Although he has in years past bought many hogs in England and imported them for breeding purposes, he does not intend to do so much more, though he may get a boar from there occasionally. He showed his faith in Canadian-bred hogs by buying nine Yorkshire pigs from one of the exhibitors. Six of them were prize winners, and four of them won first prizes.

Not the least of the values of the sheep on a farm is that of cleaning up the weeds on a stubble field after the small grains. They will eat nearly every variety that starts there so closely as to prevent their seeding, and practically to prevent their starting another season. There are some who claim that the same results can be obtained by plowing under the weeds to enrich the soil, but this is not the case for two reasons. If the weeds are allowed to reach a stage of growth where they have much value as a green manure, they will probably have ripened some seeds, while if they are plowed under before they have grown enough to ripen seeds they have but little fertilizing value, and the process must be repeated very often. But if the sheep are turned in they change these weeds that they eat to a more valuable fertilizer than we should expect the green weeds to be, as they add to what they obtain from them all that they get from their grain feed, which we should not omit when they were feeding on weeds, although we know that some of those weeds eaten by sheep, and rejected by many other animals, are rich in nutritious matter, and more so in protein than many of our grasses. Then they reach where the plow does not, into the borders of the field, the hedgerows and other places where the grass indicates that the soil is very rich, and they transfer what they find there to the less fertile parts of the field. How many have taken notice that the sheep usually choose for lying down the almost barren spots, not caring to lie down where the grass is rank, unless when they resort to the shelter of some tree for shade in the spring before shearing or when a shower is coming? Almost invariably when not feeding they will go to some side hill to lie down, if such a place is in the pasture, and enrich that by their droppings, while they remain on the more fertile spots only long enough to gather their food.

It would pay the grain farmer to have a movable fence, or, as they are called in England, hurdles, to enclose a flock of sheep where they have taken off oats, rye or wheat, and do not want to put in another crop at once, to keep up the fertility of the soil. In England they are used not only for this, but they often break such fields, and sow them to the English or flat turnip, and then hurdle the sheep on them to eat the turnips after they are fairly well grown. This doubly enriches the field, which is one reason why the fields in England have a heavier turf than we often produce here, and why they carry more cattle and sheep to the acre than we average.

There is still another advantage in a flock of sheep which many farmers do not consider as they should. There are many farmers' families with their hired help who could make good use of the carcass of a sheep or lamb almost each week in cold weather, and there is no meat more nutritious and wholesome unless it be that from the poultry yard. If farmers would produce more of these meats and use them on their tables, they could laugh at the beef trusts and the packers of pork. When we were young there were no meat markets within miles, and although the butcher or meat pedler came round about once a week, he had but little patronage from the farmers. Barrels of salt beef and pork in the cellar, hams and shoulders in the smoke house, and a supply of poultry and eggs almost every day in the year, were the things that gave us the right to claim the title of independent farmers.

The raising of live stock has largely fallen off in the Eastern States within our recollection. We remember when few farmers ever had to buy a horse, and Western horses were almost unknown. There were many who raised a colt nearly every year, at least in Vermont and Maine, and although a few were brought into Massachusetts from Canada, they were uncommon enough to attract notice when seen, and were taken usually by those who had no mares to raise colts from, or who were not farmers and needed the use of a horse every day in the year. They were not high-priced horses thus raised, but they served their owners well, and the farmer found it more profitable to sell than to buy.

Cattle were generally raised, and the yokes of oxen and steers managed to do much of the farm work, and usually sold at prices which, if not up to present beef rates, seemed almost like finding money to those who did not feel the cost of having fed them, as all they had eaten had been grown on the farm. The superannuated cows were consigned to the family beef barrel as heifers were grown to take their places. Farmers usually had a few pigs or shotes to sell to the mill hands and shoemakers who fattened them mostly on their house and garden waste. No longer ago than 1870 there were seven times as many sheep east of the Mississippi river as west of it, and the farmers had lambs, mutton and wool to sell.

All this was not the intensive farming of which so much is said now, and perhaps it would not be wise to revert to the customs of those days, but the stock kept furnished fertilizer for the crops that were grown, and there were few deserted farms. When the old people were unable to do the necessary work longer, there was usually another generation ready to take their places, and those who gave up the farm were sure to have a little sum laid by, unless they had been more than usually unfortunate or very extravagant, that supported them in their old age in such comforts as they had been accustomed to.

About the close of the war began a change which grew greater as years passed by. The corn fields disappeared and the stock decreased in number. The cry that "we can buy it cheaper than we can raise it" was applied to grain and to meats, and even to garden vegetables. Those who felt unable to hire help during the war when wages were high, and the prices of produce also high, felt less able to do so when produce prices and land values decreased more rapidly than wages.

Land was left unproductive, men and teams were idle with the idea that it cost more to produce a crop here than it did on the fertile and newly settled lands of the West, and it was not remembered that without considering market values the food value of a home-grown crop would be the same. Farmers began to be obliged to buy, and produced nothing to sell, and the farms kept less stock, and less acres were cultivated each year.

Work in the Apple Orchard.

Summer apples should invariably ripen on the trees; so thoroughly ripen that they are ready to fall off. When a slight jar will bring them to the ground is the time to pick. The trouble with much of the fruit in our markets is premature picking. To a certain extent, this is true of winter apples; they should not be picked until all the force of the sunshine and warm weather has been elaborated into the juice. If picked before that, such apples as the Baldwin are unfit for use in the winter. The Red Astrachan and the Sweet Bough are two of the apples which particularly need maturity before picking.

Some of the apples, especially those which ripen in the fall, should be left on the tree as long as they will hang if you wish to know their highest flavor. The Porter of the market is a comparatively flavorless fruit; but if you will let a Porter hang on a tree until lemon yellow, and perhaps a little watery on one side, you will have an apple that is nearly perfect. This question of ripening needs to be considered by apple lovers more than it is. Never buy those in the market which have not a bright color and a smooth skin. The slightest appearance of shriveling indicates a worthless fruit.

The handling of apples must become a prominent topic, and a revolution must be wrought. I discharged one good worker because I could not induce him to lay the apples in the basket. Every one was picked off quickly and either dropped two or three inches or slightly tossed. The result was, of course, to crush two or three cells or more in each apple, and this is the beginning of decay. Although it may not show for some weeks, every such apple is ready for premature rotting. Such a barrel, stored side by side with one properly picked, will be undergoing decay two months before the other. In other words, if you want your Baldwins, your Spitzenbergs, Jonathans and Pippins to keep all winter, they must be handled like eggs. What we want during the picking season is not quickness but care. If this cannot be secured, we had better go out of apple growing. I am aware that public sentiment has to be greatly changed about the apple. The fruit placed in market is immature and not decently handled.

Now comes the sorting, and here the habits of the orchardists must be quite as greatly changed as in the picking. America is to become the orchard of the world and to hold the market we have got to learn how to put the best fruit to the front, and so pack our fruit and store it that it will tell no lies. The grading should be into not less than four packages. There should be the absolutely perfect apples, grade No. 1; then grade No. 2 should be an apple nearly as good as No. 1, and fit for market during the early winter; No. 3 should take in the defective apples or slightly wormy, but yet fairly good fruit, while No. 4 should be turned at once into cider. Every grade should be properly labeled and never sent into market without a label. Any effort to cheat by packing second grade into the middle of first-grade barrels will be detected and ruin your standing. The time has come when our national honor and our individual honor must go together.

Where apples are to be stored, it is quite time that our talk about cold storage should be better understood. While cold-storage houses are valuable in great orchard sections, nothing of the kind is necessary for the ordinary orchardist. What is wanted is a frost-proof cellar which is moist but not musty, and thoroughly clean.

This cellar should be capable of being closed up tightly after the beginning of freezing weather and only opened for handling purposes during the winter. The windows should be darkened and closed until late in the spring. I have a brook running through my cellar, and it is very desirable where it is possible. During the warm weather the cellar should be kept absolutely clean and thoroughly ventilated. No rot or mustiness, or bad odors should be tolerated for an hour.

It is very desirable that every farmer who grows apples to any large extent should have his own cider mill. He should certainly have his farm engine for all sorts of work, and this engine would run a small home-made cider mill, so that the waste apples could be used up throughout the whole season. In this way the ground is kept clear, and if he is inclined to be tidy his cider will be entirely free from dirt and rot, which are liable to constitute part of it when made away from home. The refuse, which is unfit for cider, should be put into a compost pile at once, so that it can be turned into manure, and no worms be allowed to get into the ground to work future mischief. Pure cider and cider vinegar command a good price, and where a man has established his reputation he can get quite a figure above the market.

The apple crop has become so valuable that it would not pay any longer to grow second-rate varieties. Every one should carefully consider this question and mark for grafting out the stock which cannot rank as the most profitable. Of course we must avoid the habit of grafting over and over again to accommodate novelties.

In some way the fashion came out of relegating apple trees to the rear of homes, while the front lawns were given to another class of shade trees. There is still an impression that the apple tree should not be allowed to occupy a prominent position in lawns, which are intended for ornament. The useful and the beautiful must be separated. I am sorry to say that a good many of our horticultural writers have indorsed this view of the matter. It is high time to get rid of such a notion altogether. There is no more beautiful shade tree in the world than an apple tree. No flowers surpass those of the orchard. The fragrance is unrivaled. For beauty of form as well as variety of form the different varieties of apples give us a wide scope. I enter a strong plea for making our tree lawns profitable as well as beautiful. Let the apple tree be sacred to our homes, and let it get all the care which we are now spending on forest trees and foreign trees. In one of my lawns I find a weeping apple of decided characteristics—in fact, it has only one fault, that is, that its weeping carries it over the ground, until it occupies more space than I can afford to give it. The Northern Spy, with its large, round head, is an object of superb beauty, while the Baldwin, with its characteristic abandon of growth, gives the impression of strength and character.

Can we have long-lived apple trees—as long as those which were planted by our fathers? I have still standing four trees, which were planted in 1791; but they are in better preservation than some trees that were planted since 1850. What is the trouble? Evidently in planting a large orchard it should be a factor to secure trees that should be lasting as well as fruit of high character. Some of our best varieties of apples must be grafted high up, on seedlings, or double worked on other varieties. I do not see why, with hardy stock secured, and with proper feeding our apple trees may not last at least one hundred years. This age cannot be secured for neglected or for half-starved trees; nor for trees that are bruised and gnawed by animals; nor for those whose roots are torn by the plow; nor for those which are beaten or pounded to secure the fruit. A well-kept apple tree ought to last considerably more than one hundred years, bearing good crops all the while.

Set it down once more, and do not forget it, that if you wish for healthy trees and normal crops you must spray your apple trees against fungus as thoroughly as against insects and worms. Spray in the fall with lime mixture until the trees are well coated, and in the spring spray very early with bordeaux as a preventive against fungus.—New York Tribune.

The beet-sugar men of the West make great pretense of their ability to compete with cane sugar grown in the tropics, but all the experience we have had in the East particularly at Portland, Me., and Franklin, Mass., was to the effect that the beets raised were worth more for cattle food than for making into sugar. We do not believe the production of beet sugar by high-priced labor in this country will ever be a success. Of course, if it becomes desirable to employ women and children, at starvation wages, in weeding beets and growing the crop, perhaps something may be done in that industry, but we think root growing would be very much more profitable as cattle food than any attempts to produce beet sugar in New England or New York.

The coal situation at the mines has begun to improve by the resumption of work at two-thirds of the collieries. On the railroads the congestion is unrelieved, and promises to grow worse when heavy shipments of anthracite coal begin. In local markets there is, according to the dealers, little or no anthracite coal. Prices are now lower for coal in New York city than in Boston. As soon as coal begins to arrive freely, the prices must necessarily be reduced. No doubt many coal dealers are doing their best to keep prices up and to make the most profit they can while there is an opportunity. Some dealers have made a great mistake in forcing their old customers to pay fancy prices for coal which only costs regular rates.

While three lots amounting to eighty-nine cattle sold at Chicago on Oct. 20 at $8.25 per hundred, there was one sale of thirteen head at $3.25, and much more than half of them sold below $7, if not below $6.50. This shows a wide range, and shows plainly the difference between well-bred and well-fed cattle and those which have not had either good breeding or good feeding. Canners and cutters sold from $1 to $2.50, fat cows from $2.55 to $5.25, heifers from $2.40 to $6.25, bulls from $2.25 to $5.50 and calves from $2.50 to $7.50. While the prices on prime stock are about forty cents a hundred pounds less than last week, they are $1.80 higher than one year ago, and we can scarcely find fault with the marketman if he asks more for his steaks and roasts.

W. A. Stockwell of West Lebanon, N. H., has purchased from Hood Farm, Lowell, Mass., a particularly fine Jersey bull by Hood Farm Pogis, out of Sophie 6th of Hood Farm, a tested daughter of Toronto. Hood Farm Pogis was for five years at the head of the Hood Farm Show herd, winning many first prizes in the East. In 1899 he was first-prize bull at the Wisconsin and Illinois State fairs. His son, Hood Farm Pogis 9th, also a prize winner, out of the phenomenal cow Biggis, that sold at auction for $875, is now at the head of the Hood Farm herd. Sophie 6th traces back to imported Tormentor, thus giving to her son a great butter inheritance. The young bull is rich in both dairy and show qualities, and will do much to bring up the standard of the herd into which he goes.